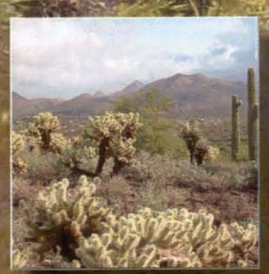
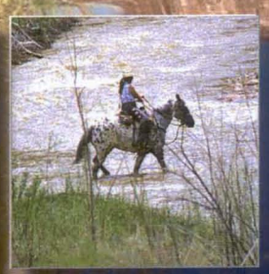
Upper New River Area Drainage Master Plan

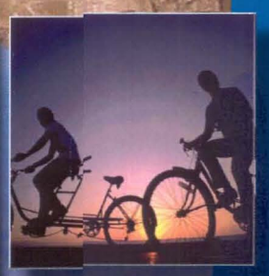
June 2008

Flood Control District of Maricopa County

Contract FCD 2005C020
Stantec Project No. 182000418







Final Scenery and Recreation Resources Assessment Summary Report

Prepared by:

EDAW | AECOM

Stantec

UPPER NEW RIVER AREA DRAINAGE MASTER PLAN

FINAL SCENERY AND RECREATION RESOURCES ASSESSMENT SUMMARY REPORT

Prepared for:

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009-6399

Contract No.: FCD 2005C020

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February 2007
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CHAPTER 1 PROJECT BACKGROUND

1.1 Overview

The Flood Control District of Maricopa County (District) is currently in the process of preparing an Area Drainage Master Plan (ADMP) for the Upper New River (UNR) watershed. The purpose of the ADMP is to identify and analyze existing flooding problems and anticipate potential flooding problems associated with planned future developments. The UNR watershed, especially along the New River watercourse is currently being planned for developing residential communities and/or commercial activities in approximately five years. The ADMP is typically planned before substantial land development occurs to identify drainage problems and develop cost-effective solutions to mitigate or manage flooding in the watershed. This effort also allows the District to develop flood mitigation measures that utilize and optimize the natural drainage features, complement the physical and natural environment, and typically cost less compared to implementing post-development flood mitigation measures. The Upper New River ADMP will include but not be limited to identification of current and estimated drainage problems, hydrology, hydraulics, erosion setbacks, sedimentation analysis, Federal Emergency Management Agency (FEMA) floodplain delineations, existing and future transportation and other infrastructural facilities, and stakeholder and public coordination. Also, included within the ADMP is an evaluation of environmental, scenery and multi-use resource analysis, survey, development of alternative solutions, and preparation of preliminary design plans based on a preferred alternative. It is intended that floodplain managers, planners, developers, and land owners, use and implement the Upper New River ADMP for planning and designing flood mitigation solutions and for guiding or regulating development that either affects drainage or is within the floodplain within the Upper New River watershed.

1.2 Project Area

The Upper New River ADMP watershed is located in the northeastern part of Maricopa County as seen in the base map in (Figure 1). Upper New River project area encompasses approximately 169 square miles, mostly undeveloped and relatively pristine, undisturbed Sonoran desert. Upper New River project area boundary is somewhat linear in configuration extending north from Jomax Road spanning upward adjacent to Interstate -17 toward Table Mesa Road. Geographically, the Upper New River project area is bound between Tonto National Forest on the Northwest, vast mountain ranges such as Bradshaw Mountains, New River Mountains, Daisy Mountains and Gavilan Peak on the North and Northeast, and smaller mountain ranges such as Eastwing Mountains, Middle Mountains, Pyramid Peak, Deems Hills, and Phillips Mountain on the South and Southeast. On the West, the project area is bound between the Agua Fria River and Beardsley Canal, stretching east to Deadman Wash and Skunk Creek. The major public entities with planning jurisdiction within

Bradshaw Mountains
New River Mountains
Boulder Creek
Agua Fria River
500 Kv Power Rd.
New River
FH 41
17
New River Rd.
Gavilan Peak
Maricopa County
City of Peoria
Lake Pleasant
Daisy Mountain
Deadman Wash
Skunk Creek
New River Rd.
Agua Fria River
Beardsley Canal
74
New River Rd.
Phillips Mountain
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Loop 303 (Future)
17
Lake Pleasant Rd.
New River
Eastwing Mountains
Pyramid Peak
New River Dam
Middle Mountain
Union Hills
Deems Hills
Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Peoria City Limits
- Phoenix City Limits
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes

0 0.25 0.5 1 Miles

N

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Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 1
Base Map of Project Boundaries and Reference Features

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the project area are Maricopa County, Arizona State Land Department, City of Phoenix, and City of Peoria. Portions of the project area fall into special planning areas for agencies such as the US Forest Service and the Bureau of Land Management (BLM).

Some of the other significant features within and surrounding the study area are the Central Arizona Project Canal (CAP), future Loop 303, Interstate highway-17 and Lake Pleasant. Some master planned communities currently in progress include Arroyo Vista, Arroyo Norte, Anthem West (City of Phoenix), and Sonoran Mountain Ranch (City of Peoria).

1.3 Objectives and Goals

District's overall vision, pertaining to scenery, parks and recreation, and open space resources, is to have maximum level of protection from the effects of flooding through fiscally responsible flood control actions and multi-use facilities. Once identified, these actions and facilities can then complement and enhance the beauty of the desert environment for the residents of Maricopa County and future generations. In response, the District developed a policy for Aesthetic Treatment and Landscaping of Flood Control Projects in 1993. A primary objective of the District's Board approved Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects is planning and designing flood control facilities that preserve, enhance and complement the beauty of the natural desert landscapes and character of local communities within Maricopa County. It is the District's goal for aesthetic treatment of flood protection facilities to incorporate features and measures that will:

- Enhance the visual appearance of flood protection facilities by achieving context sensitivity with the surrounding landscapes
- Help preserve the visual character of natural desert landscapes
- Protect and enhance local community character
- Increase aesthetic and public value of the District's flood protection facilities by designing them to incorporate opportunities for year round recreation, open space linkages and multiple-use areas

Essentially, the goal of the District is to enhance the public value of the District's flood protection facilities by planning them to include scenery, recreation and multi-use opportunities for use by residents of Maricopa County as an integral part of the structural design.

1.4 Purpose and Need

The intent of the District's overall mission and vision is to provide flood control facilities while preserving the valued character and enhancing the unique visual fabric of the lands within Maricopa County. The District also recognizes the need to identify

unique visual resources and existing and planned recreational opportunities at the onset of the project, since it will influence the planning and design formulation of alternative systems. It will also increase the possibility of incorporating scenic and recreational features in the development of final alternatives. Additionally, as viewed by the District, the assessment will be useful to gain public acceptance, local community support and promote cost share opportunities to the fullest.

With that in mind, a primary purpose of this study is to conduct an assessment of Scenery and Recreation Resources that will serve as a frame of reference to be used as part of planning and designing flood control facilities within the Upper New River ADMP project area. This assessment is intended to serve as a tool for existing and future actions and facilities of flood control alternatives and will aid the District in providing context sensitive solutions that preserve and complement the character of the natural, rural, suburban and urban landscapes within Upper New River ADMP project area. The purpose and significance of Scenery and Recreation Resources assessment is briefly described below:

Scenery Resource Assessment (SRA) –
The SRA will serve to identify the surrounding natural and local community visual character within the study area. Predominantly, the SRA helps to analyze the visual impact of the flood control structures. The results of the analysis will be utilized to better complement the existing landscape settings as part of the ADMP. The SRA is further elaborated in Chapter 2 and Chapter 3.

Recreation Resource Assessment (RRA) –
The RRA will serve to identify the regional and local (study area) recreational features within the study area. The assessment is conducted to enhance the public value of the District's flood protection facilities by identifying potential opportunities for year round recreation and open space linkages as an integral part of flood control facilities' design. The RRA is further elaborated in Chapter 4.

The Scenery and Recreation Resource Assessment is also intended to serve as a tool to assist the District, project partners, stakeholders and the public in determining the desired visual character for flood control facilities that may be developed within the project area.

1.5 Scope of Work

Final Scenery and Recreation Resource Assessment for Upper New River ADMP was carried out at both, regional and local (study area) levels. Some additional data was collected as part of the study and final data collection and evaluation effort. These are as described below:

- The Scenery and Recreation study area boundary was extended 1 mile outside the project boundary, henceforth referred to as the study area, to take into

account the influences of adjacent landscapes that may impact planning and/or landscape treatment decisions for flood control facilities.

- Focus area was identified along the New River where structural alternatives may be planned for potential flood control facilities. A more detail landscape character assessment was then performed within the focus area to ensure that any structural alternatives planned in and around those areas are context sensitive to its natural and/or built surroundings.
- Additionally, for Regional Recreation Resource Assessment, the study area was extended 10 miles beyond the project area boundary. This is to account for both, planned and existing regional recreation facilities as well as propose utilization of natural corridors created by the washes to establish potential connections to some adjacent recreational facilities that could benefit and influence the project.

1.6 Approach and Methodology

The Scenery and Recreation Resource Assessment is conducted to identify features and areas in and around the project area that should be preserved, enhanced or improved. The overall approach and methodology implemented for the Final Scenery and Recreation Resource Assessment tiers from the Scenery, Recreation and Open Space Assessment for Maricopa County (SROSA) and is derived from the following documents provided by the District:

- Guidelines prescribed in the USDA Forest Service AH # 462, The Visual Management and Scenery Management System, and
- Landscape Aesthetics and Multi-Use Consultant Handbook (FCDMC).

In addition, portions of the assessment also draw information and direction from the following documents provided by the District:

- Preliminary Existing Landscape Character Assessment for Maricopa County
- (PELCA), (FCD, 2003)
- Policy for Aesthetic Treatment and Landscaping of Flood Control Projects, (FCD, 1992)
- Aesthetic and Multi-use Design Guidelines for Flood Control Basins and Channels, (FCD, 2002)
- Assessing the Relative Ability of Flood Protection Methods to Complement and Achieve Compatibility with the Visual Character of Landscape Settings in Maricopa County, (FCD, 2003)

1.7 Implementation Phases

The approach was first put into implementation by the District to develop a regional assessment of scenery and recreation resources within Maricopa County, entitled

respectively, The Scenery Resource Assessment for Maricopa County and The Recreation Resource Assessment for Maricopa County (SROSA). This preliminary assessment was then utilized by EDAW to develop a more detailed analysis of both, scenery and recreation resources within the Upper New River ADMP study area. In addition to the information that was available in the district provided SROSA, this report includes information based on the new data that was gathered by EDAW including the updated assessments that were performed as part of the Final SRA and RRA for the Upper New River ADMP.

CHAPTER 2 SCENERY RESOURCE ASSESSMENT (SRA)

The purpose of the Scenery Resources Assessment (SRA) is to assess the character, quality and visual sensitivity of lands contained within and adjacent to the project area. Results of the assessment will assist in analyzing opportunities and constraints for development of flood protection facilities. Each section in this chapter describes the various components and aspects of SRA in further detail starting with the goals and objectives.

2.1 Goals and Objectives of SRA

A primary goal of the District's Board approved *Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects* is to preserve the visual beauty and other aesthetic qualities of the urban, rural and natural settings in Maricopa County as an integral part of planning and designing flood control facilities. Achievement of this goal is viewed by the District as essential to gaining public support and to attract partnerships with stakeholders in the community who may be interested in sponsoring their implementation. Objectives related to the achievement of the goal are:

- Incorporate considerations for landscape aesthetics at the beginning and throughout the planning process for the study
- Preserve and complement the visual character of natural, rural, suburban and urban landscape settings thus achieving context sensitivity
- Retain and preserve distinctive natural and cultural landscape features and areas of the Sonoran desert, including opportunities for public viewing of mountains, uplands, washes and other scenic landscape elements
- Utilize flood control projects to improve and restore landscapes with visual disturbances to a condition that is complementary to the valued character of the surrounding landscape
- Involve project partners, stakeholders and the public in determining the desired visual character and aesthetic appearance of planned flood control facilities within the planning area

Within the Upper New River ADMP watershed, the assessment will evaluate the landscape character, scenic quality, and visual sensitivity of lands contained within and adjacent to the project area, i.e. the study area. The assessment shall include:

- Collecting data pertaining to the Scenery Resources and utilizing the data to perform the Scenery Resource Assessment within the study area.
- Analyzing the compatibility of Scenery Resources with a variety of non-structural and structural flood protection methods that may be utilized in the alternative systems.
- Identification of a variety of Landscape Design Themes that may be appropriate to apply to flood protection solutions based upon the visual landscape character of the study area.

2.2 Assessment Components and Process

The Scenery Resource Assessment (SRA) is conducted to maximize opportunities for preserving and enhancing the picturesque landscapes within the study area. The SRA specifically addresses the following three data components that help to establish the relative importance of the scenic resources within the context of the Upper New River ADMP study area:

A. *Landscape Character Analysis* –
To identify and describe the predominant physical and visual characteristics of the Character Types, Subtypes and Landscape Units found within the study area,

B. *Scenic Quality Analysis* –
To provide a measure of the overall scenic quality, attractiveness and importance of landscapes found within the study area, and

C. *Visual Sensitivity Analysis* –
Provides a measure of people's concern for the scenic quality of lands such as major roads and trails, recreation use areas such as campgrounds, and/or water bodies such as lakes, streams, etc. within the study area

Chart A below illustrates the various sub-components of each of the above data components and will be described in detail in the following sections in this chapter.

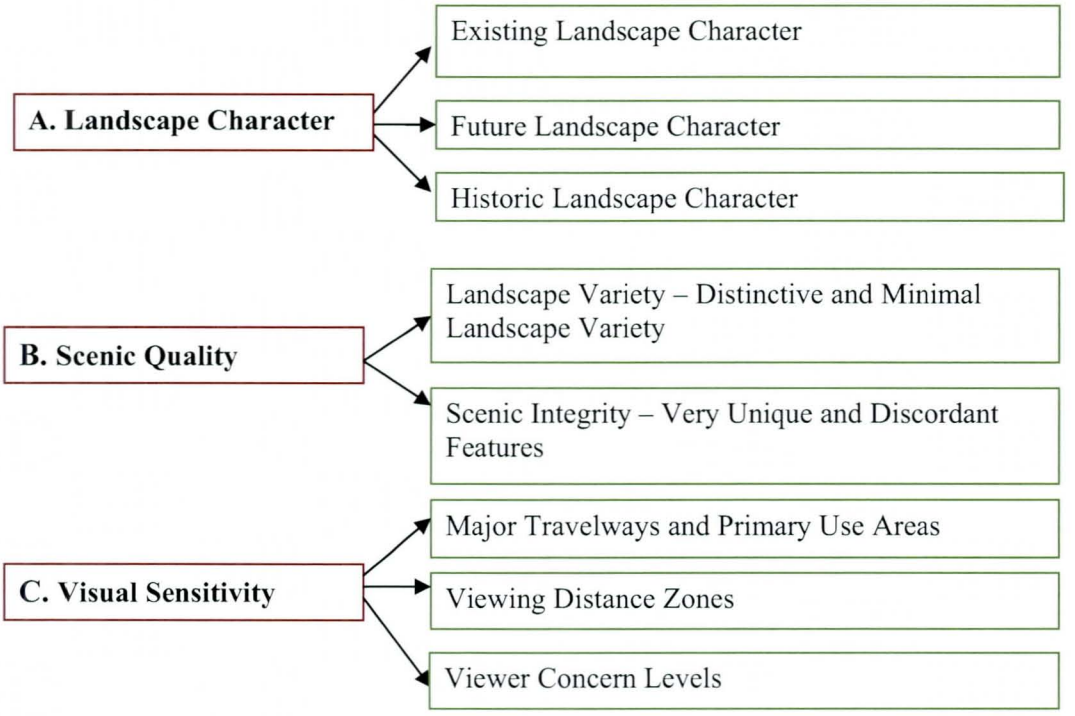


Chart A
Components of Scenery Resource Inventory

Based on the methodology and resources outlined in Section 1.6 and the components illustrated in Section 2.2, the process implemented to conduct the SRA is illustrated in Chart B below. Majority of the information tiers from the District's SROSA, however, delineation of Landscape Character Sub-Units, analysis of Historic Landscape Character and Scenic Integrity assessment were carried out as a part of the Final Scenery Resource Assessment. As illustrated in the SRA process (Chart B), the scenery resource components are then subjected to assessments of the relative compatibility with a variety of flood protection methods (Section 3.1) that are routinely applied by the District in delivering flood protection facilities to the citizens of the Maricopa County. The compatibility analyses were also updated to include changes resulting from the Sub-unit mapping as part of Final SRA. Lastly, landscape design themes that befit the local character of the community and blend with the existing landscapes were identified and described (Section 2.6) for potential implementation.

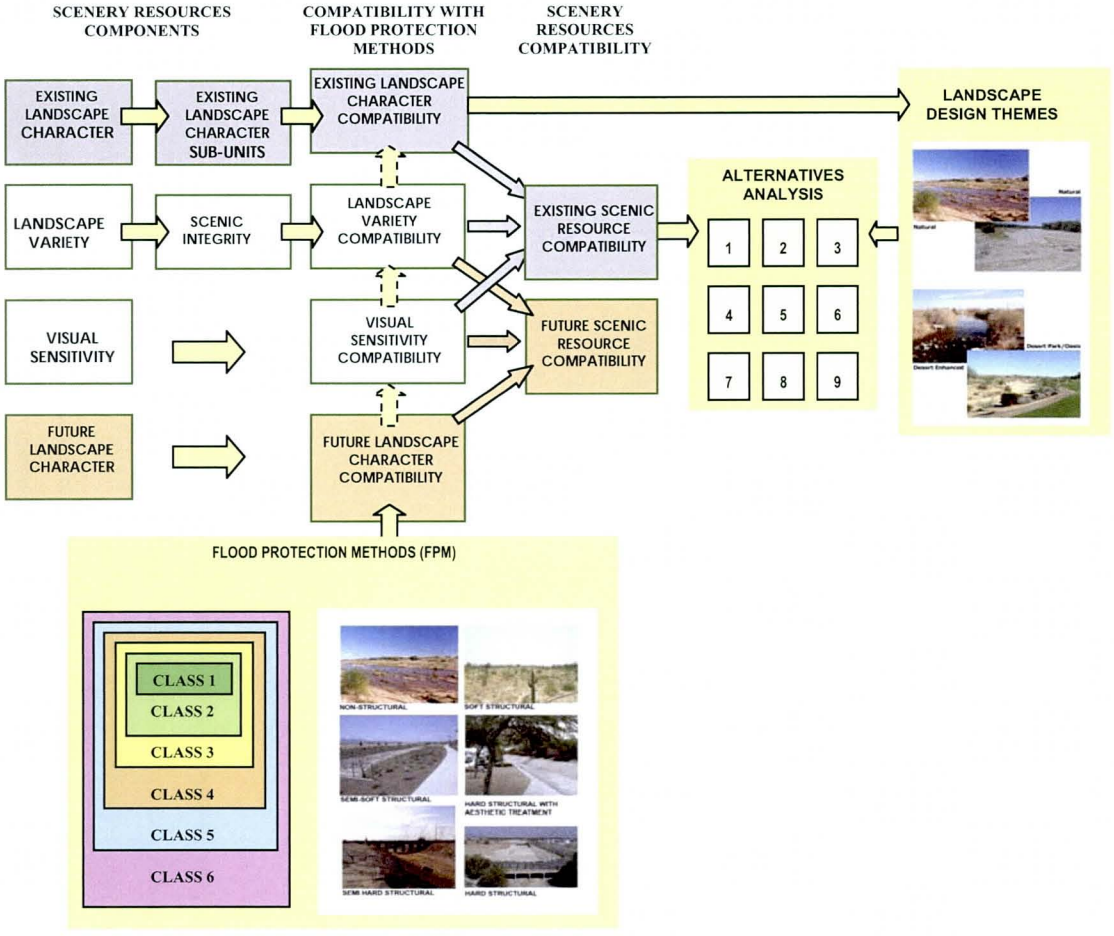


Chart B
Scenery Resource Assessment Process Flow Chart

The results of the SRA will be used to assess the effects of the alternatives upon the existing visual character of the study area and assist in planning flood control facilities that complement the beauty of the natural landscapes and character of the local communities within the Upper New River ADMP project area.

2.3 Landscape Character Assessment

2.3.1 Overview

Landscape Character is defined as "the physical appearance and cultural context of a landscape that gives it an identity and "sense of place." (District, 2003). The valued character of the landscape is derived from the positive visual attributes or characteristics that are predominant in each landscape. These attributes may be defined by natural (naturally occurring) or developed (culturally modified) features. Natural settings are those that consist of features including landform, vegetation, rock form, and water that demonstrate little if any man-made modifications or disturbance (may include ranching and grazing lands). Developed settings include those areas in which rural or metropolitan uses have been established, and the character is influenced by development and circulation patterns, building types, and open space. Furthermore, these settings may be characterized based on dominant visual elements including form, line, color, texture, scale, and landscape composition.

By planning and designing flood control facilities in a manner that emulates the visual characteristics of the positive physical attributes associated with natural and/or culturally modified settings, the facilities will appear to be complementary to, or may enhance the valued landscape character.

2.3.2 Landscape Character Stratification

The District's method for evaluating landscape character was developed from a commonly recognized tiered system used by USDA Forest Service (USDAFS) visual resource managers and assessors to classify the visual character of National Forest landscapes. The landscape character delineation follows a hierarchical system of land classification (Chart C) in which each physical unit represents areas of land that has common distinguishing physical and visual characteristics of landform, rock formations, water forms, vegetative patterns, cultural features and landscape composition.

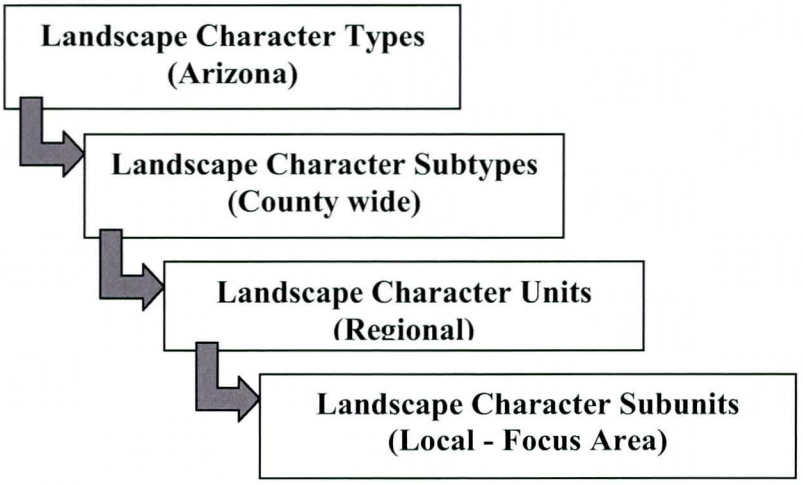
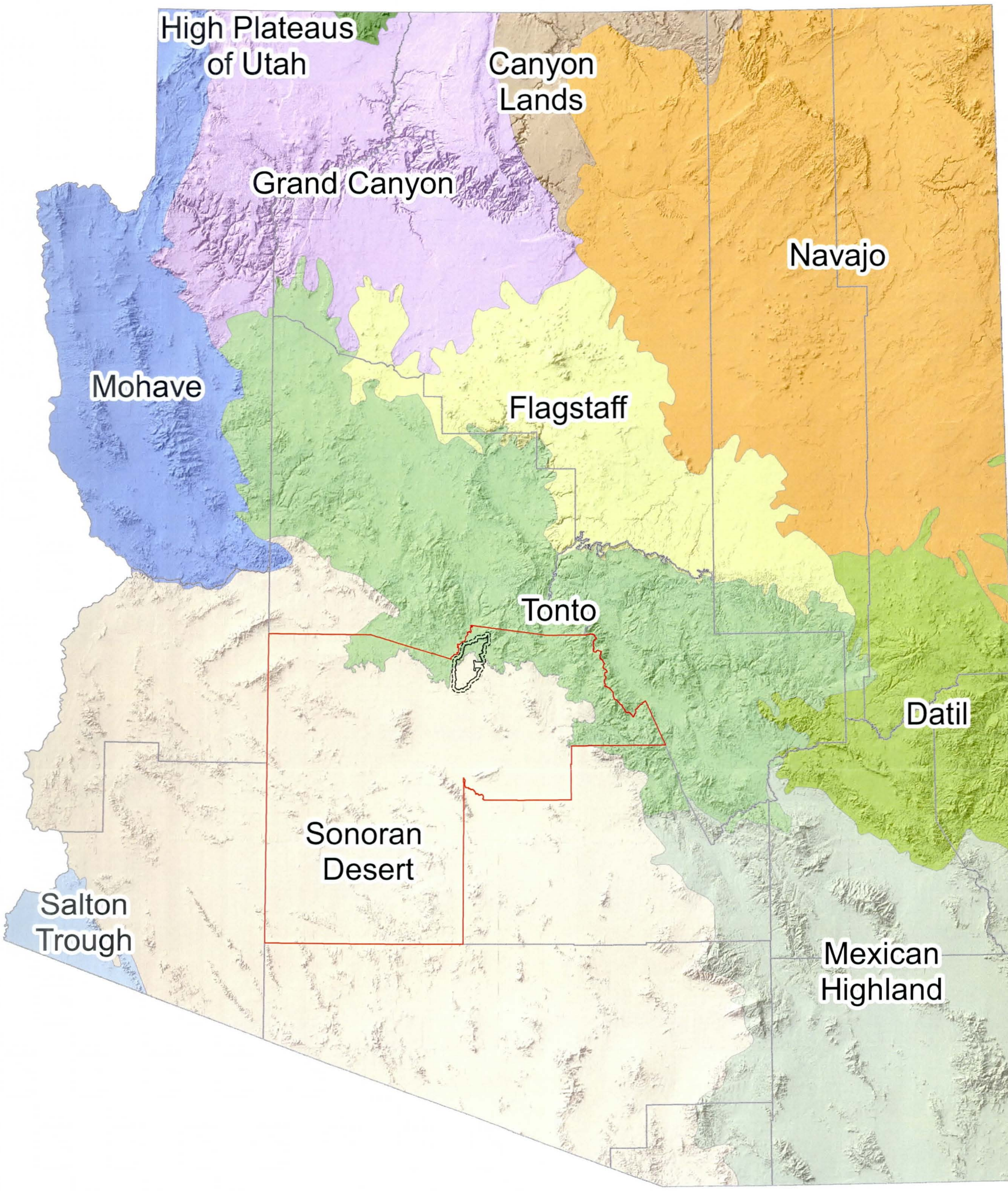


Chart C
Landscape Character Stratification

The study begins with refining the USDA Forest Service provinces (identified by Nevin Fenneman) into landscape character types based on landform, vegetation, and water as identified in Landscape Character Types and Subtypes of the National Forests in Arizona and New Mexico (Figure 2). The ***Landscape Character Type*** is defined as a regional area of land that has similar distinguishing visual characteristics of landform, rock formations, water forms, vegetative communities and patterns of these landscape elements. Since a landscape character type is too broad or great in diversity of character to provide a logical frame of reference to classify physical features of cultural contexts, the District refined the information by identifying ***Landscape Character Subtypes*** within the Sonoran Desert Landscape Character Type. The subtypes are generally significantly different in visual characteristics from each other. To further stratify the landscape character subtypes, the District identified five (5) cultural settings within Maricopa County and combined these with the physical divisions of the Sonoran Desert and the subtypes of the Tonto Landscape Character Type to produce ***Landscape Character Units***. When compared to landscape character type or subtype which are classified based on physiography and vegetation at a macro-scale, a landscape character unit is classified based on attributes of landform, rock form, water form, vegetation and cultural features at a finer scale; it has similar distinguishing characteristics of physical and biological factors that combine to create its scenic expression. Landscape Character Units are the smallest unit of land classification in the countywide assessment and are identified for existing as well as future land uses. Landscape Character Units for Maricopa County have been identified and described in the Preliminary Existing Landscape Character Units (PELCA) with the exception of lower bajada and arroyos.

As part of the Final Scenery Resource Assessment for Upper New River ADMP performed by EDAW, the existing Landscape Character Units were further



LEGEND

LANDSCAPE TYPES

- Canyon Lands
- Datil
- Flagstaff
- Grand Canyon
- High Plateaus of Utah
- Mexican Highland
- Mohave
- Navajo
- Salton Trough
- Sonoran Desert
- Tonto

BOUNDARIES

- Maricopa County
- County Boundaries
- Project Boundary
- Project Buffer Area (1 mi.)

0 5 10 15 20 Miles

N

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FCD 2005CO20

Figure 2
USDA Forest Service Landscape Character Types of Arizona

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subdivided into ***Landscape Character Subunits*** within the Focus Area (Figure 1) producing the smallest unit of land classification for the Scenery Resource Assessment. Landscape Character Subunit classification was done using high resolution color aerial photography taken in 2005 and field visits within the focus area. A landscape character subunit is an area of land that has similar or identical distinguishing visual characteristics, based upon its combination of physical factors and cultural uses. The Sub-unit delineation is based on micro-level attributes of cultural features (Suburban – Master Planned Community) and/or natural or physical features (Natural and Pastoral Bajada – Dense Vegetation) that make up a Landscape Character Unit. Landscape Character Subunits serve as a frame of reference for the development of landscape design themes that should be appropriately applied to the flood protection structures planned within the Upper New River ADMP study area.

Below, is a detailed description of all the Landscape Character Components (Chart C) that lie within the Upper New River study area.

2.3.3 Landscape Character Types

The Landscape Character Types identified within the Upper New River Study Area are derived from the District's *PELCA*. Landscape Character Types are defined as regional area(s) of land having similar distinguishing visual characteristics of landform, rock form, water and vegetative communities and patterns.

Two landscape character types exist within Maricopa County—the Tonto Character Type and the Sonoran Desert Character Type. Both are found within the Upper New River Study Area (Figure 3) and are described below:

Tonto Landscape Character Type

The Tonto Landscape Character Type is composed primarily of the New River Mountains to the east and the Bradshaw Mountains in the upper northwest corner and their associated uplands encompassing the northern portion of the project site just northeast of Lake Pleasant. It is characterized by the dramatic landform of the mountains surrounding the New River, soft rolling hills dissected by arroyos and flat mesas that frame the northern expanse of the study area. The vegetation within the Tonto lands of the Upper New River Study Area is composed of similar species as the Sonoran Desert Landscape Character Type, though with greater density than commonly found in the lower Sonoran Desert. It is characterized by the saguaro forests, small cacti, desert grass species, mesquite bosques, intermixed with Sonoran Desert species such as mesquite, palo verde, and ironwoods. Water on the site is limited to that found after storm events in the intermittent arroyos and potentially by underground springs. Only near the New River Nature Preserve will you find areas with a year-round supply of surface water.

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
070808_Fig 2_UNR_USDA_LC_Types.mxd
Agua Fria River
Beardsley Canal
74
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East Carefree HWY
7th Street
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Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

TONTO LANDSCAPE CHARACTER TYPE

- Sonoran Arizona Uplands Subtype
- Upper Tonto Subtype

SONORAN DESERT LANDSCAPE CHARACTER TYPE

- Sonoran Mountain Lands Subtype
- Sonoran Valley Lands Subtype
- Sonoran River Lands Subtype

LANDSCAPE CHARACTER TYPES OF ARIZONA

Source: USDA Forest Service

LANDSCAPE CHARACTER TYPES OF MARICOPA COUNTY

Source: Flood Control District of Maricopa County

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Figure 3
Landscape Character Types & Sub-Types

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Sonoran Desert Landscape Character Type

The Sonoran Desert Landscape Character Type includes the southern portion of the study area and is the dominant character type within the study area. It is characterized by broad views across open desert and its backdrop of desert mountains in the distance. The landforms associated with the Sonoran Desert Character Type includes a vast bajada at the base of New River and Bradshaw mountains, associated desert foothills and a slightly sloping broad valley plain surrounding the valley river. Water is restricted to New River and CAP, bisecting the study area North-South and East-West respectively. Vegetation associated with the Sonoran Desert includes some species that are found in Tonto lands such as saguaro, especially in the bajada which intermingles with typical Sonoran desert scrub varieties such as Palo Verde and are located within the lowest and driest areas. The flat plains are typically occupied by large homogenous occurrences of the creosote bush, commonly termed Creosote Flats.

2.3.4 Landscape Character Subtypes

Subtype delineations used in this study are based on those defined by the USDA Forest Service for the Tonto Character Type and those defined by the District for the Sonoran Desert Landscape Character Type. These subtypes represent the division of the larger character types into smaller units based on common physical features such as landform, vegetation, water, and rock form.

Tonto Landscape Character Subtypes

The Landscape Character Types of the National Forests in Arizona and New Mexico defines two subtypes within the Tonto Landscape Character Type: the Upper Tonto and the Sonoran Arizona Uplands.

Upper Tonto

The *Upper Tonto Landscape Character Subtype* constitutes a very small area in the northern part of the study area approximately 200 acres. This character subtype is primarily composed of a series of peaks and valleys with jagged peak landforms and vegetation varying from minimal on the steeper rocky slopes to dense in the lower alluvial valleys between the peaks.

Sonoran Arizona Uplands

The *Sonoran Arizona Uplands Landscape Character Subtype* is characterized by lower, less jagged mountain peaks and the associated uplands that are situated below the Upper Tonto subtype. Landform is typical of the subtype, composed of a mixture of hills and primarily U-shaped arroyos and V-shaped ravines that create a distinctive topographic image. Vegetation is varied in diversity and

density, with larger quantities and densities of saguaro, cacti and xeroriparian plant species typically found in the Sonoran Desert Landscape Character Type within the study boundary. Water is limited to storm events that send water through the arroyos and down into the lower elevations of the watershed in the form of flash floods. Rock forms are less dramatic in structure than those found in the Upper Tonto, but are still distinctive. Typical forms include outcrops along the hills and mountains as well as exposed banks and boulders associated with the arroyos. Cultural modifications include the rural development occurring along the western portion of New River Road.

Sonoran Landscape Character Subtypes

The District document titled *Preliminary Landscape Character Assessment for Maricopa County (PELCA)* identifies three subtypes within the Sonoran Desert Landscape Character Type: the Sonoran Mountain Lands, the Sonoran Valley Lands, and the Sonoran River Lands. Both the Sonoran Mountain Lands, the Sonoran Valley Lands are found within the Upper New River Study Area. Though not located in the study area, but within the 1 mile extended study area, the River Lands of the Agua Fria River Basin border the western edge of the project boundary just south of Lake Pleasant.

Sonoran Mountain Lands

The *Sonoran Mountain Lands Landscape Character Subtype* is primarily made up of the bajada upland that form the slopes which transition between the rugged topography of the Tonto character type to the north and the Sonoran Valley Lands along New River and Deadman Wash. The Landform mostly consists of the gentle slopes of the bajada's scattered foothills of the Eastwing Mountains, Pyramid Peak and Deem Hills, along the north and south portion of the site. The vegetation varies within the subtype from the desert shrub species, grasses, and isolated Saguaro cactus found on the foothills. Tree species found within the Bajada lands include Palo Verde, Ironwood, and Mesquite as well as Cholla and many other cactus species. Bursage, Creosote, and other desert shrubs are common in all areas of the foothill lands with very lush riparian planting found along the river valley and washes. Water on-site is limited to storm events, with the arroyos channeling water from the surrounding mountains and tributary systems within the bajada down into the Valley Lands. Rock form is most distinctive in the foothills, though occasional outcrops do occur in the bajadas and arroyos. Cultural modifications are minimal except in the bajada, where rural, suburban, and scattered industrial areas near New River may be found.

Sonoran Valley Lands

The *Sonoran Valley Lands Landscape Character Subtype* is characterized by the relatively flat lands at the lowest elevations of the study area surrounding New

River and Deadman Wash. Landform is predominantly flat in the valley, with the cobble stone washes bisecting the landscape. Vegetation varies from pure stands of creosote communities, or creosote flats in the valley to dense xeroriparian bosques of mesquite and palo verde adjacent to the washes, referred to as "green-up areas". Water is predominantly associated with storm events, as storm waters flow across the study area and are collected into New River and Deadman Wash. Rock form is minimal, though interesting cobble like desert pavement is scattered throughout the valley lands with cobble stone, minor outcrops and boulders found in the major washes. Cobble stone is found in the drainage systems due to the exfoliation of the nearby mountains (New River Mountains and Bradshaw Mountains) and heavy seasonal flows that rid fines from the drainage ways thus creating a more cobble like wash. Cultural modifications in the Valley Lands are primarily industrial developments scattered along the New River.

Sonoran River Lands

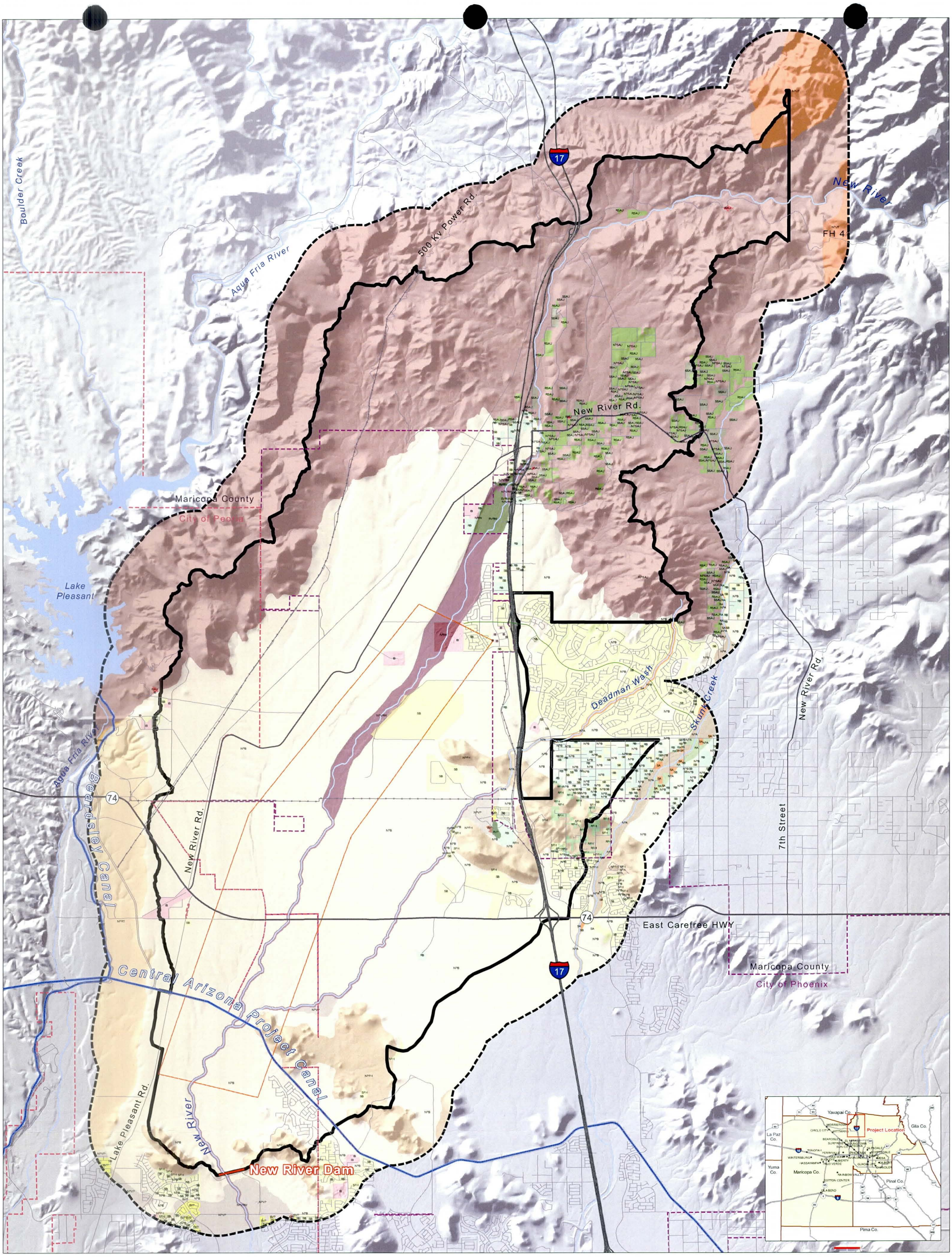
A small portion of the project area west of the Agua Fria River and within the 1 mile extended boundary site are classified within the *Sonoran River Lands Subtype*. The Agua Fria River, which is the southern boundary of the project area belongs to this category and typically comprises a large scale braided river channel system within the floodplain terrace. The Agua Fria Watercourse Master Plan (AFR-WCMP), which is also part of this subtype, was developed through the District as a means to achieve floodplain management concurrent with opportunities to integrate open space and recreation uses with floodplain management. The City of Peoria is also proposing reclaimed water near the Agua Fria River as a key element in their water supply, and is currently developing a Water Reuse Master Plan to guide the development of its direct and indirect use activities. The ecological system within this area support true hydro-riparian vegetation dominated by native shrub species and tree species including Willow and Mesquite.

2.3.5 Existing Landscape Character Units

Landscape Character Units (LCU) are subdivisions of the Landscape Character Subtypes based upon similar physical and cultural landscape characteristics. The Cultural Settings are identified in the Existing Landscape Character Assessment for Maricopa County. These settings were based on the existing MAG Land Use Plan. The land use classifications were reclassified to correspond with one of five Cultural Settings: Natural and Pastoral, Rural, Suburban, Urban, or Industrial. Appendix A contains the descriptions for the five Cultural Settings used in the PELCA for Maricopa County.

The Physical Division used to identify the Landscape Character Units varies depending on the Landscape Character Type. For landscapes in the Tonto Lands, the subtype is combined with the Cultural Setting to identify the overlying LCU. Within

the Sonoran Desert Landscape Character Type, the three subtypes were further sub-divided by the District into Physical Divisions. These physical divisions have been identified in the District's PELCA for Maricopa County. The visual elements and physical features have been identified and defined for each physical division within the subtypes. This report shall only discuss the Existing LCU's found within the Upper New River Study Area, which is the area within 1 mile of the actual study area boundary. However, as mentioned earlier, as part of the Final Scenery Resource Assessment, the Existing Landscape Character Units were further sub-divided into Existing Landscape Character Subunits within the focus area along the New River. The Existing Landscape Character Units (Figure 4) and Subunits (Figure 5) within the study area boundary are listed below in Table A and their delineation within the study area is shown in Figure 5.1:



LEGEND

TONTO LANDSCAPE CHARACTER TYPES:

Sonoran Arizona Upland Subtype

- ISAU Industrial Sonoran Arizona Uplands
- NPSAU Natural and Pastoral Sonoran Arizona Uplands
- RSAU Rural Sonoran Arizona Uplands
- SSAU Suburban Sonoran Arizona Uplands

Upper Tonto Subtype

- NPUT Natural and Pastoral Upper Tonto

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Valley River Lands Subtype

- NPRC Natural and Pastoral River Channel
- NPRT Natural and Pastoral River Terrace
- SRT Suburban River Terrace

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Mountain Lands Subtype

- NPB Natural and Pastoral Bajada
- NPFH Natural and Pastoral Foothills
- NPA Natural and Pastoral Arroyo
- RB Rural Bajada
- RFH Rural Foothills
- RA Rural Arroyo
- SA Suburban Arroyo
- SB Suburban Bajada
- SFH Suburban Foothills
- IFH Industrial Foothills
- IB Industrial Bajada

Sonoran Valley Lands Subtype

- IVP Industrial Valley Plain
- NPVP Natural and Pastoral Valley Plain
- RVP Rural Valley Plain
- SVP Suburban Valley Plain
- NPVRW Natural and Pastoral Valley River & Washes
- RVRW Rural Valley River & Washes
- SVRW Suburban Valley River & Washes
- IVRW Industrial Valley River & Washes

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 4
Existing Landscape Character Units

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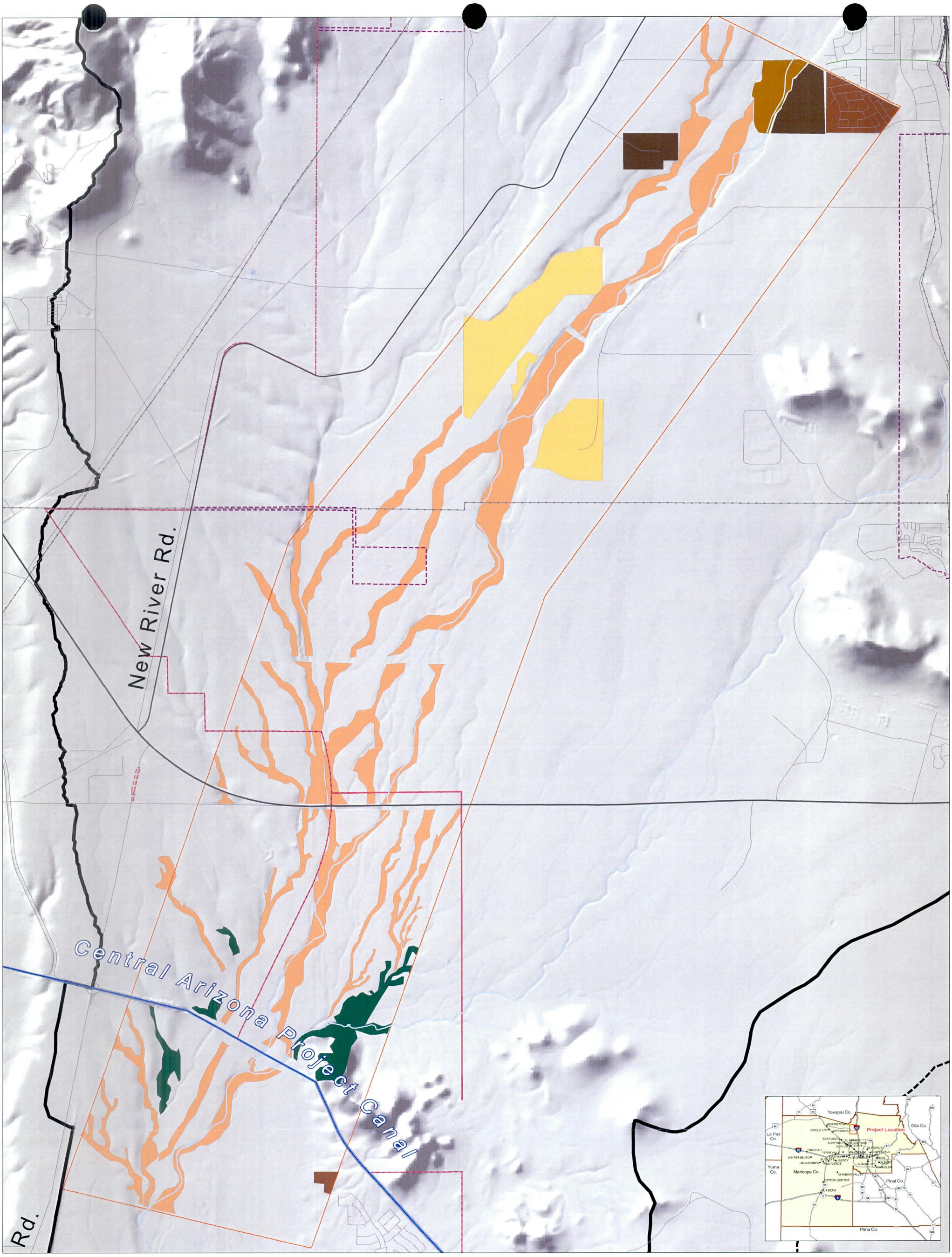
Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ U.S.A. 85044



LEGEND

LANDSCAPE CHARACTER SUB-UNITS:

- Industrial Bajada - Mining
- Industrial Valley Rivers and Washes - Mining
- Suburban Bajada - Master Planned Community (Desert)
- Natural and Pastoral Bajada - Dense Vegetation
- Natural and Pastoral Bajada/ Natural and Pastoral Valley Rivers and Washes - Desert Wash
- Natural and Pastoral Bajada - Mining

0 0.125 0.25 0.5 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
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Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 5
Existing Landscape Character Sub-Units

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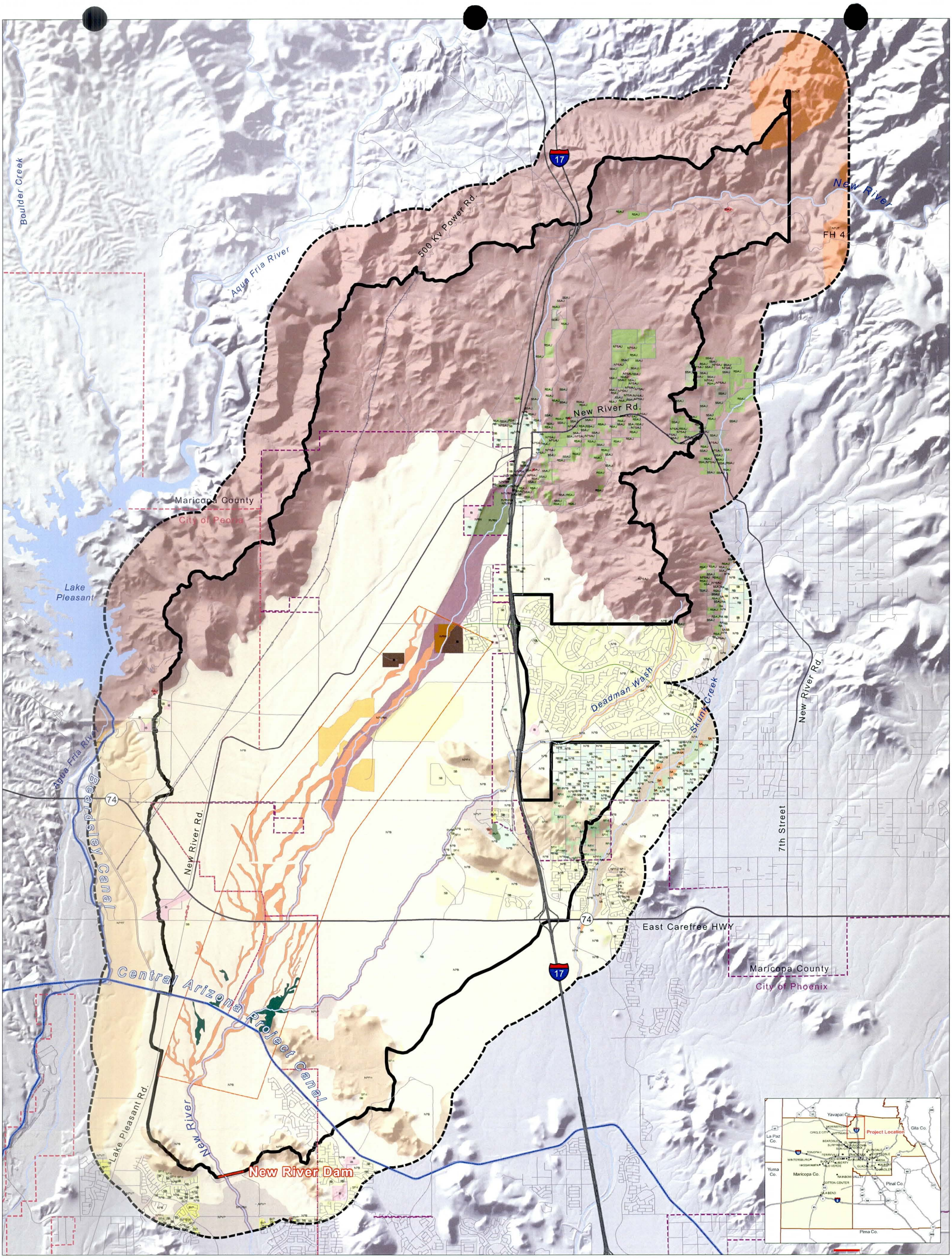
Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ U.S.A. 85044



LEGEND

TONTO LANDSCAPE CHARACTER TYPES:

Sonoran Arizona Upland Subtype

- ISAU Industrial Sonoran Arizona Uplands
- NPSAU Natural and Pastoral Sonoran Arizona Uplands
- RSAU Rural Sonoran Arizona Uplands
- SSAU Suburban Sonoran Arizona Uplands

Upper Tonto Subtype

- NPUT Natural and Pastoral Upper Tonto

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Valley River Lands Subtype

- NPRC Natural and Pastoral River Channel
- NPRT Natural and Pastoral River Terrace
- SRT Suburban River Terrace

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Mountain Lands Subtype

- NPB Natural and Pastoral Bajada
- NPFH Natural and Pastoral Foothills
- NPA Natural and Pastoral Arroyo
- RB Rural Bajada
- RFH Rural Foothills
- RA Rural Arroyo
- SA Suburban Arroyo
- SB Suburban Bajada
- SFH Suburban Foothills
- IFH Industrial Foothills
- IB Industrial Bajada

Sonoran Valley Lands Subtype

- IVP Industrial Valley Plain
- NPVP Natural and Pastoral Valley Plain
- RVP Rural Valley Plain
- SVP Suburban Valley Plain
- NPVRW Natural and Pastoral Valley River & Washes
- RVRW Rural Valley River & Washes
- SVRW Suburban Valley River & Washes
- IVRW Industrial Valley River & Washes

LANDSCAPE CHARACTER SUB-UNITS:

- Industrial Bajada - Mining
- Industrial Valley Rivers and Washes - Mining
- Suburban Bajada - Master Planned Community (Desert)
- Natural and Pastoral Bajada - Dense Vegetation
- Natural and Pastoral Bajada/ Natural and Pastoral Valley Rivers and Washes - Desert Wash
- Natural and Pastoral Bajada - Mining

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 5.1
Existing Landscape Character Units & Sub-Units

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Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ U.S.A. 85044

Existing Landscape Character Units & Subunits
Tonto Landscape Character Type Units
Sonoran Arizona Upland Subtype
Natural and Pastoral Sonoran Arizona Uplands
Rural Sonoran Arizona Uplands
Suburban Sonoran Arizona Uplands
Industrial Sonoran Arizona Uplands
Upper Tonto Subtype
Natural and Pastoral Upper Tonto
Sonoran Landscape Character Type Units
Sonoran Mountain Lands Subtype
Natural and Pastoral Foothills
Rural Foothills
Natural and Pastoral Arroyo
Rural Arroyo
Suburban Arroyo
Suburban Foothills
Industrial Foothills
Natural and Pastoral Bajada
Desert Wash
Dense Vegetation
Mining
Rural Bajada
Suburban Bajada
Master Planned Community (Desert)
Industrial Bajada
Mining
Sonoran Valley Lands Subtype
Natural and Pastoral Valley River & Washes
Desert Wash
Rural Valley River & Washes
Suburban Valley River & Washes
Industrial Valley River & Washes
Mining
Natural and Pastoral Valley Plain
Rural Valley Plain
Suburban Valley Plain
Industrial Valley Plain
Sonoran River Lands Subtype
Natural and Pastoral River Terrace
Natural and Pastoral River Channel
Suburban River Terrace

Table A
Existing Landscape Character Units and Subunits

Overall, the dominant LCU within the Upper New River study area include the Natural and Pastoral Sonoran Arizona Uplands to the north, which are within the Sonoran Arizona Upland Subtype and includes the Bradshaw Mountains and New River Mountains. Also, included are the Natural and Pastoral Bajada LCU's in the central and southern area along New River and Deadman Wash. At the center of the study area, Natural and Pastoral Foothills and Suburban Bajada LCU are secondary in dominance and are scattered along the mountains on the eastern portion of the study area. The other LCUs are minimal and scattered along the eastern portion of the study area.

2.3.5.1 Tonto Landscape Character Type Units

Sonoran Arizona Uplands Landscape Character Subtype

Natural and Pastoral Sonoran Arizona Uplands Unit

Within the Upper New River Study Area this LCU is composed of low mountains, rolling hills, knolls, steep slopes, arroyos and V-shaped ravines and occupies approximately 37 percent of the study area. This character unit is predominantly located in the upper northern study area. It is a transitional sloping landscape similar to the Upper Bajada LCU, with occasional flat "tables" or benches of land where vegetative communities of single species of Saguaro or cholla occur. Absent are the cliffs, deep gorges, and interior chapparal found within other areas of the Sonoran Arizona Uplands Landscape Character Unit.
The predominant landforms within this LCU are the slopes of rolling hills and low mountains dissected by New River with additional arroyos of various scales. The vegetation of the Upland is similar to the species in the Sonoran Desert. However, the density and species diversity tends to be greater in the Sonoran Arizona Uplands than that found in the lower desert landscape due to the greater precipitation received at the higher elevations of this LCU. Common species include small cacti such as barrel and cholla cactus, xeroriparian tree and shrub species, grasses, and saguaro cactus.

Water on the site is limited to that found after storm events in the intermittent arroyos and potentially by underground springs. Only near the New River Nature Preserve will you find areas with a year-round supply of water. Rock form within the Natural and Pastoral Sonoran Arizona Uplands of the Upper New River study

area is transitional from the rugged forms of boulders and outcrops typical of the Upper Tonto to the finer scale cobble stone typical of the Sonoran Desert.

Rural Sonoran Arizona Uplands Unit

The Rural Sonoran Arizona Uplands LCU is very similar to the Natural and Pastoral Sonoran Arizona Uplands LCU. The majority of this unit is approximately 1.5 percent of the study area and made up of large parcels, zoned for rural residential, with some smaller, traditional rural lots scattered throughout the northwest portion of the study area primarily along New River Road. The natural shapes of the landform remain intact and are found within the upper northwest area and are scattered along New River Road. In addition to the native species found in the natural uplands, the vegetation in the rural uplands includes the introduction of exotic trees, shrubs, and groundcovers associated with human developments. Examples include palm trees, tamerisk and turf with rock form typical of that found in the Natural and Pastoral Sonoran Arizona Uplands LCU.

The overall natural form of the Sonoran Arizona Uplands LCU has not been modified in the Rural Sonoran Arizona Uplands LCU. Horizontal and other straight lines enter the landscape in the form of graded roadways, cleared pastures, and other modifications to the landscape, while the many braided arroyos and rolling hills typically remain intact, adding to broken curved lines throughout the LCU. A large color palette is introduced through human elements such as buildings, vehicles, equipment, small cattle farming and industrial features. Modifications in the landscape introduce a fine to smooth texture in the form of roadways or metal structures, as well as a broken, staccato texture introduced through the many straight, vertical features such as fences, power poles, and walls.

Suburban Sonoran Arizona Uplands Unit

The Suburban Sonoran Arizona Uplands LCU of the Upper New River Study Area is approximately 0.63 percent of the study area and is primarily tucked within the Rural Sonoran Arizona Uplands along the northwest area of New River Road. These areas are comprised of lands associated with landforms modified from their natural form and include but are not limited to grading for housing plots and flattened areas of the typically sloped, rounded forms of the Uplands. However, the natural form is retained intact or only slightly modified throughout this landscape, creating an overall rolling form similar to the natural visual character. In addition the vegetation in the Suburban Uplands includes the introduction of exotic trees and shrubs associated with residential development. Turf and other plant species found in typical suburban developments throughout Maricopa County are present within this LCU. Water in this unit is varied from the natural form, pools, irrigation systems and other introduced waters are evident in the Suburban Uplands landscape. Rock form is typical of the natural landscape.

Flat, irregular to rectilinear forms are added into the landscape by the introduction of housing, parking lots and other features typically associated with development. Vertical lines are introduced by the buildings and other cultural modifications. Horizontal straight lines enter the landscape in the form of graded roadways and rooflines, while the many braided arroyos typically remain intact, adding continuous to broken curved lines throughout the LCU. The color of the landscape is predominantly green mixed with the reds, browns, and the more subdued greens of the native vegetation. A large color palette is introduced through human cultural elements such as buildings, vehicles, equipment, and decorative landscaping.

Industrial Sonoran Arizona Uplands Unit

The Industrial Sonoran Arizona Uplands LCU constitutes a little more than .01 percent of the Upper New River Study Area. This LCU can be found in the upper northeast region of the study area just south of Table Mesa Road and results in a significant amount of landscape disturbance and the alteration of the visual elements of form, line, texture and color found in the surrounding landscape. The landforms in the Industrial Sonoran Arizona Uplands have been modified from its natural form to graded roads and industrial facilities associated with the gravel

mining facility which has flattened areas of typically sloped, undulated landforms of Uplands. The site shows the removal of the majority of native vegetation all adding to the disturbance and alteration in the landscape.

The landscape elements of this landscape unit consist primarily of formal forms and angular lines created by the industrial setting. The introduction of industrial landscapes such as flood control facilities, extraction of natural resources, communication facilities, etc. usually results in a significant amount of landscape disturbance and may result in the alteration of the visual elements of form, line, texture and color as seen in the photo above. This alteration to the land introduces great contrasts to the landscape, making the facilities extremely visible.

Upper Tonto Landscape Character Subtype

Natural and Pastoral Upper Tonto Unit

The Natural and Pastoral Upper Tonto LCU constitutes a little more than 1.68 percent of the Upper New River Study Area. This area is located within the most northeastern corner of the Upper New River study area. The landform varies from tablelands and canyons to large mountain ranges and is very pristine. Vegetation is lush which includes prickly pear and saguaros that march up the mountains. The ground plain is a jagged red rock which is a nice contrast with the olive and grey green foliage.

2.3.5.2 Sonoran Landscape Character Type Units

Sonoran Valley Lands Landscape Character Subtype

Natural and Pastoral Valley River and Washes Unit

Within the project area, proceeding into New River, this unit which occupies 1.7 percent of the study area, is represented by the natural floodway of the river, often characterized by seasonal flowing water conditions year round. Typical vegetation is more of a dense riparian planting with Mesquites, Palo Verde and Willow Trees. The dense vegetation provides wildlife habitat and refuge to a wide variety of wildlife and birds. Because of their rare occurrence in the Sonoran Desert, these landscapes are highly valued and represent existing landscape character that must be preserved.

Rural Valley River and Washes Unit

Within the project area this unit occupies .2 percent of the study area. These units may be demonstrated in areas where the linear lines of the Rural environment result in dense xeroriparian plant groupings becoming established, creating continuous lines of deep greens to browns in the surrounding landscape. In most instances, however, the Rural Valley Rivers and Washes remain natural in their physical characteristics and visual elements.

Suburban Valley Rivers and Washes

The Suburban Valley Rivers and Washes LCU comprises approximately .02 percent of an extremely small portion of the Upper New River study area. Because of the overall rural character of the Upper New River area, where this

ely resides, the visual character of the Suburban Valley Rivers and Washes Landscape Character Unit is similar in form and visual character to that of the Rural Valley Rivers and Washes LCU. Cultural Modifications in this LCU occur where roads and other structures intersect the wash corridor. This results in form, line, colors, and textures that are similar to those of the Suburban Valley Plains LCU.

Industrial Valley Plain Unit

The Industrial Valley Plains Unit within the project area refers to only .006 percent of the study area and is located just west of Pioneer Historic Museum and RV Park. Also some of the tracks of land are being used for settling ponds. These areas are considered to have very low scenic integrity when compared to its surrounding landscape. With the predominance of heavy duty utility vehicles and minimal introduced landscaping, this unit represents areas that stand out in stark contrast with the existing landscape and require visual screening or buffering.

Natural and Pastoral Valley Plain Unit

The Natural and Pastoral Valley Plains are specific areas along the New River occupying 0.92 percent of the study area. Other locations include areas along Deadman Wash tucked into the valley of the Phillips Mountain. Typical of the Sonoran Valley Plains, the landforms in this unit are mostly flat with seasonally dry cobble stone washes and rivers. The predominant vegetation consists of Creosote flats, mainly homogenous stands. Trees are typically not present, unless associated with the drainage ways.

Rural Valley Plain

Rural Valley Plain character unit identifies a very small area, approximately .017 percent within the study area. Tucked in between Phillips Mountain, the primary visual impression is that of rural dwellings punctuating the landscape in a typical pastoral setting. Typical vegetation includes native vegetation similar to the xeric landscapes characteristic of the desert.

Suburban Valley Plain Unit

The Suburban Valley Plains Unit utilizes a small majority of the project area, approximately .11 percent of the study area and is tucked at the base of Phillips Mountain and along the southern end of Deadman Wash. This area is characterized by suburban residential land use. The natural landscape has been heavily

altered by developments, roads and a variety of architectural styles, and discordant construction. Typical vegetation consists of introduced landscaping that includes both native and non-native species with the occasional introduction of a palm tree or shade tree. The general impression is that of single family housing development intertwined with modified open spaces that serve human activities and needs.

Industrial Valley River and Washes Unit

The Industrial Valley River Washes Unit occupies less than .1 percent of the study area in the central portion of the project study area along New River and adjacent to Anthem Master Planned Community. The river terrace is where many natural resources are extracted and therefore land disturbance is common. The resulting landscape character within this unit exhibits a wide variety of visual character from rolling hills of sand piles to deep rectilinear gravel pits. The natural vegetation within this area has been disturbed and bladed due to large equipment and other gravel mining industrial needs, while the adjacent river corridor vegetation is very healthy and pristine.

Sonoran Mountain Lands Landscape Character Units

Natural and Pastoral Bajada Unit

The Natural and Pastoral Bajada consists of 40 percent of the study area. It is characterized as a natural geographic area that occurs on the fringes between foothills or mountain units. Typically upland Sonoran desert vegetation of creosote, brittlebush and cacti species occur in abundance within this unit with intermittent occurrences of saguaro and palo verde trees. The slopes of the bajada are typically gentle, with a braided drainage pattern. These units are one of the most susceptible units for residential development because of their attractiveness and gentle topography.

Natural and Pastoral Foothills Unit

The Natural and Pastoral Foothills consists of gentle to steep slopes bisected by valleys, occasional ravines, and peaks that are smooth to angular. Saguaro, Palo Verde and cacti occur in varying densities and compositions across the unit. This unit also is approximately 4.5 percent of the site and is primarily along the southeast portion of the study area.

Rural Foothills

The Rural Foothills constitute .16 percent of lands within the Upper New River Area. Exotic and ornamental landscape species may be introduced in association with the residential development, providing a range of plant community types that may be present within this LCU. Driveways to residential lots add curved, continuous lines to the landscape, while rural structures can add hard, architectonic lines to the subtle, rolling lines of the natural foothills. Cultural modifications also introduce a range of color palettes. Most of the Rural Foothills Unit occurs along Skunk Creek just north of Carefree Highway and east of I-17.

Natural and Pastoral Arroyos Unit

The Natural and Pastoral Arroyo shallow meandering curvilinear cobble stone bottom washes that drain the lower bajada slopes in dendritic patterns. The dense vegetation associated with the drainage washes stand out in the otherwise xeric landscape. Vegetation in the washes include; Mesquite, Catclaw Acacia and Palo Verde trees. These areas within the project site include the mountains to the east and south; Pyramid Peak, Phillips Mountain and the Eastwing Mountains and occupy .61 percent of the study area.

Rural Arroyo Unit

The Rural Arroyo LCU comprises .12 percent Of an extremely small portion of the Upper New River Study Area. Within the study boundary, most Rural Arroyos have not been modified in form, line, color, or texture from the Natural and Pastoral Arroyo, where the natural drainage system is typically preserved. The primary modifications occur in the vegetation and landform immediately adjacent to the arroyo, where native plant species are frequently removed or reduced in density and non-natives have encroached into the xeroriparian community.

Suburban Arroyo

The Suburban Arroyo LCU consists of .18 percent of the study area. The Arroyo's visual features are subordinate to the powerful contrasts created by the Suburban Setting. The recessed nature of the Arroyo combined with the consistency of textures surrounding the arroyos and their relatively small scale, reduces the visibility of this physical division. Conversely, the vertical nature of the suburban setting in conjunction with its colors, forms, and resulting contrasts

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over the elements of the Arroyo Physical Division. This unit is primarily scattered along Skunk Creek Wash tucked in between other suburban and rural developments.

Suburban Foothills Unit

The Suburban Foothills Unit comprises .16 percent of lands within study area, and is currently found along the eastern portion of the study area scattered within the foothills. The Foothills Physical Landscape Unit inhibits the grid pattern associated with the suburban setting primarily because of topographic relief. The formal rectilinear lines associated with circulation patterns in the suburban setting are transformed to curvilinear lines when they intersect the rolling forms of the foothills. Structures associated with the suburban setting, primarily residential, are organized adjacent to the modified grid pattern. The result is a landscape where both the cultural and natural landscapes are visually predominant.

Industrial Foothills Unit

The Industrial Foothills Unit comprises .008 percent of lands which are a very small percentage within study area. The sharp lines and formality of the industrial setting is predominant in this landscape unit. The industrial facilities contrast with the unrefined large mass of the foothills, resulting in a landscape with variety and contrasts through form.

Suburban Bajada Unit

This LCU occupies 5.2 percent of the study area and has scattered sites located east of the New River. Typically, natural vegetation is removed to make room for suburban residential land use. The undulated sloped landform of the bajada typically softens the structured circulation and development patterns associated with suburban setting. Natural and modified characteristics are often co-dominant in this setting resulting in alternating from, line, color and texture; however, form and line tend to be the strongest visual element.

Rural Bajada Unit

The industrial Upper Bajada Unit occupies 1.09 percent of the study area and is scattered along the eastern portion of the site along the foothills. The sloped landform of the bajada is articulated in the rural setting. Typically, natural vegetation is removed to make room for parking and staging areas for large events which may take place at the Historic Pioneer Museum. During this process the

undulating drainages associated with the bajada are either removed or straightened and channelized.

Industrial Bajada Unit

The industrial Upper Bajada Units are typically areas with disturbed natural vegetation, hard angular lines and bold forms. These areas occupy .37 percent of the study area and are near the center and southern edge of the study area. These areas include gravel mining and transfer stations scattered along the New River. Due to the form of the Bajada being gentle it becomes subordinate because of its lack of vertical topographic features and horizontal orientation. The scale of the facilities and ability to ignore natural patterns through engineering allow industrial development to occur however it is deemed fit. The cultural modifications are visually dominant within this landscape setting because of bold form and potential vertical lines associates with industrial facilities on the horizontal plain of the Bajada.

Sonoran River Lands Landscape Character Units

Natural and Pastoral River Terrace

The Natural and Pastoral River Terrace LCU comprises approximately 3.30 percent of the study area. This LCU predominately resides on the western edge of the Beardsley Canal and the Agua Fria River and is within the 1 mile project buffer area and not within the immediate study area. This LCU consists of multiple tiered flat landforms with slight surface undulations occurring adjacent to the river channel. The surface is covered with a mixture of gravel and sand, providing the appropriate drainage for desert vegetation to occur. The linear nature of the River Terrace is indicative of a focal landscape composition. The varying widths of this landscape and associated wide-open views are characteristic of a panoramic landscape composition.

Natural and Pastoral River Channel

The Natural and Pastoral River Channel LCU comprises approximately .01 percent of the study area which is a very small portion of the Upper New River Study Area. This LCU predominately resides on the western edge of the Beardsley Canal and the Agua Fria River and is located just south of Lake Pleasant. This LCU consists of a braided network of curvilinear small shallow channels separated by undulating low mounds. Historically these landforms were in constant flux based on seasonal river flow. During flooding events, typically following El Nino winters or after monsoon storms, the velocity and stream flows increases where perennial flows exist. As in the Aqua Fria River a muddy short-lived flash flood is the result. The vegetation is mostly xeroriparian and includes mesquite, palo verde, and occasionally the cottonwood and plant species such as creosote and ragweed are common.

Suburban River Terrace

The Suburban River Terrace LCU comprises approximately .01 percent of the study area which is an extremely small portion of the Upper New River Study Area. This LCU predominately resides on the western edge of the Beardsley Canal and the Agua Fria River. This LCU is very similar to the visual character of the Suburban Valley Rivers and Washes Landscape Character Unit and is similar in form and visual character to that of the Rural Valley Rivers and Washes LCU. Cultural Modifications in this LCU occur where roads and other structures intersect the wash corridor. This results in forms, line, colors, and textures similar to those of the Suburban Valley Plains LCU.

2.3.5.2a Existing Landscape Character Sub-Units

The study area Scenery resource Assessment further refines the existing landscape character units by identifying sub-units at a micro level, represented by visually comparable tracts mostly influenced by similarities in existing vegetation composition and structure. The identification of sub-units provides a basis for the development of landscape themes, which in turn provides a direction for the type of landscape treatment that will be complementary at a local scale. Sub-units were identified using color aerial information of the project area taken in 2006, along with field reconnaissance that was conducted following the mapping. The sub-units represent the division of the larger character types based on common physical features such as cultural (human built), landform, vegetation, water, and rock form. (Figure 5 & 5.1)

Industrial Bajada – Mining

The Mining Operation sub-unit within the Bajada Unit typically consists of a visually dominant large expansive area that has been degraded through gravel mining operations and a waste transfer station. The removal of sand and gravel products from the river floodplain leaves large scars in the ground plane that seriously impact the landscape character of the area. Also the waste transfer station, with its large vehicles have bladed the vegetation creating negative impacts. Due to this negative impact on the land, this sub-unit represents areas that may require buffering or screening within view of flood control structures. This would provide a setting conducive for year round multi-use and recreation.

Industrial Valley Rivers and Washes – Mining

The Mining Operation sub-unit within the Industrial Valley Rivers and Washes typically consists of a visually dominant large expansive area that has been degraded through mining operations. The removal of sand and gravel products from the river floodplain leaves large scars in the ground

plane that seriously impact the landscape character of the area. Due to this negative impact on the land, this sub-unit represents areas that may require buffering or screening within view of flood control structures. This would provide a setting conducive for year round multi-use and recreation.

Natural Pastoral Bajada - Dense Vegetation

The Natural Pastoral Bajada - Dense Vegetation subunit is characterized by the presence of dense vegetation growing adjacent to the arroyos found in the natural and pastoral upper bajada units. Dense vegetation areas are observed when several of these washes merge; creating an area of convergence that is subject to water inundation for longer periods. Generally the piedmont tributary landform immediately west of the New River restricts lateral flows of the river and causes moisture rich conditions along its edge that supports the dense vegetation and thriving natural habit unique to these areas. The dense vegetation within this sub-unit consists of Mesquite, Palo Verde, Creosote, Brittlebush and cacti species. These areas represent special zones that should be preserved in order to provide a natural sustainable environment for wildlife movement corridors, which connect habitats and natural open space. The bed form of these channels is influenced by the topography of the channel bed. Within the mountain lands sub-type, the topography of the channel bed consists mainly of cobble stone reaches.

Natural Pastoral Bajada - Desert Wash

The Desert Wash subunit located in the Natural Pastoral Bajada Unit can be described as those naturally occurring washes and associated riparian over bank areas that possess higher density plant material, though not as dense as the 'Dense Vegetation' sub-unit. The wash bed form is rocky, typical of washes within the upper bajada areas. Vegetation along the washes

includes Palo Verde, Mesquite Creosote, Brittlebush and cacti species. These occur in abundance within this unit with intermittent occurrences of saguaros.

Suburban Bajada Master Planned Community – Desert Character

Master Planned Community – Desert Character subunit located within the still vastly undeveloped Bajada area represents a landscape plant palette that is predominantly sonoran desert character. Visually dominant desert palette planting is found interspersed in the large natural open space areas within low to medium residential neighborhoods. The character of the neighborhood is influenced by informal medium density planting of desert species that complement the surrounding natural landscape. This subunit is a direct result of the gradual shift of the natural pastoral bajada unit to the suburban bajada unit as more growth occurs.

Natural and Pastoral Bajada – Mining

The Natural and Pastoral Bajada Mining sub-unit is centrally located within the study area and extends downward to the valley plains adjacent to New River. Due to its lack of vertical topographic features, horizontal orientation and its close proximity to New River, it becomes subordinate to large scale gravel mining. The mining operation sub-unit typically consists of the removal of sand and gravel products from the river floodplain leaving large scars in the landscape that seriously impact the landscape character of the area. This sub-unit represents areas that may require buffering or screening to any flood control structure in order to provide an environment conducive for year round multi-use recreation.

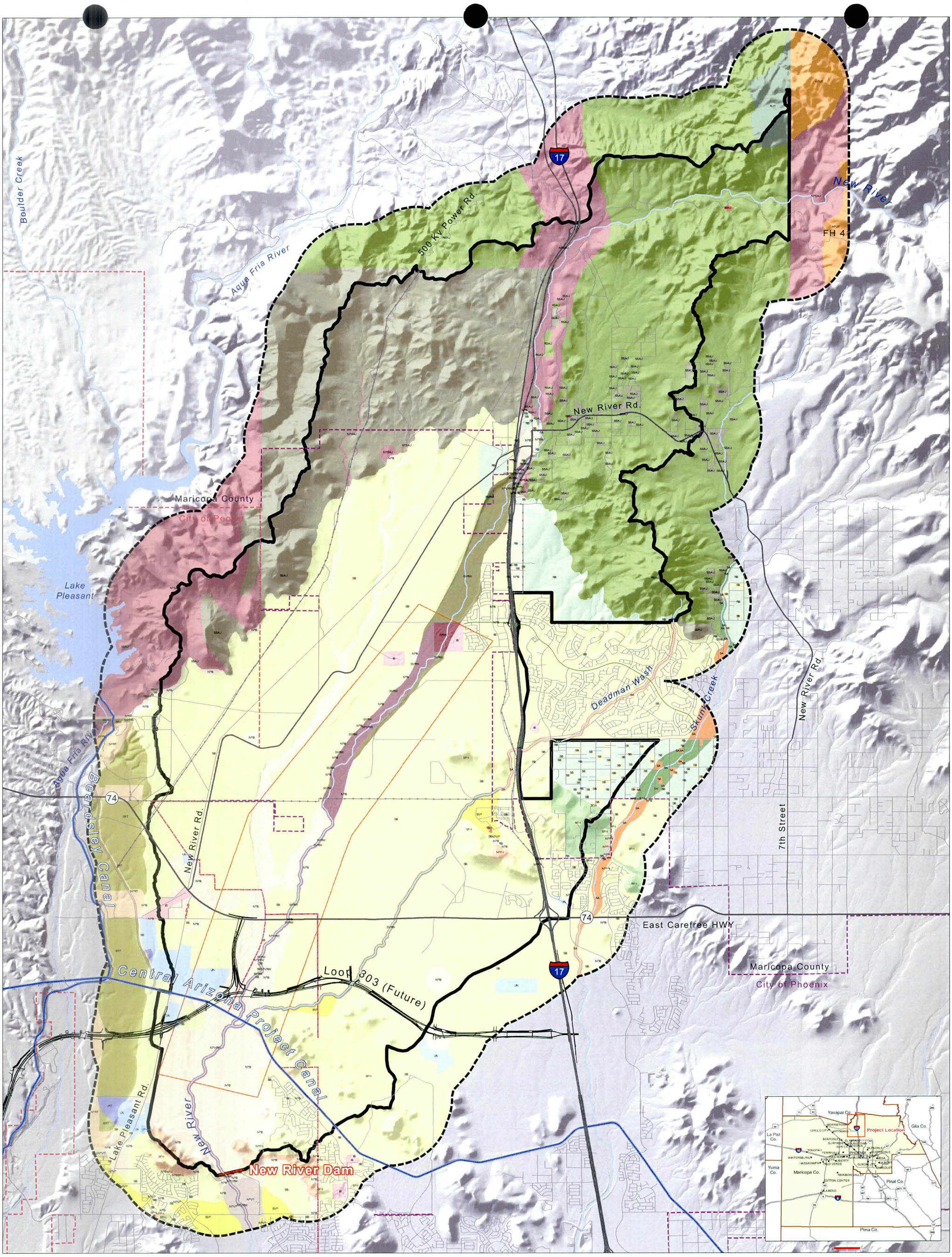
2.3.6 Planned Future Landscape Character Units

The future growth planned for this area is an indication of how the landscape character will evolve in the future. The City of Phoenix, City of Peoria and the Arizona State Land Department, within the study area, plan on developing some areas within the Upper New River ADMP study area. This especially includes the area along the New River watercourse which may be developed in approximately 5 years.

In order to plan for, and respond to, the future visual character of the county, the District has applied the above methodology to the MAG General Plan to develop the Future Landscape Character Assessment of Maricopa County. Similar to the Existing Landscape Character Assessment, information is derived by combining the Physical Division of a unit with the planned future Cultural Setting, based on the reclassified MAG General Plan.

Cultural Settings, stated in the PELCA, are modifications in the landscape that can be characterized as either rural or metropolitan. Rural landscapes are most often agricultural while metropolitan areas are most often defined by development patterns, circulation patterns, building types and open space. These elements influence the visual dominance and focus within each setting. Also the pattern of development, circulation and building types act as major organizing elements that structure the visual enforcement. These patterns are then grouped and classified by four types that include rural, urban, suburban and industrial settings.

The Future Landscape Character Units identified within the Upper New River Study Area are listed below in Table B and their delineation is shown in Figure 6:



LEGEND

TONTO LANDSCAPE CHARACTER TYPES:

Sonoran Arizona Upland Subtype
- ISAU Industrial Sonoran Arizona Uplands
- NPSAU Natural and Pastoral Sonoran Arizona Uplands
- RSAU Rural Sonoran Arizona Uplands
- SSAU Suburban Sonoran Arizona Uplands

Upper Tonto Subtype
- NPUT Natural and Pastoral Upper Tonto
- RUT Rural Upper Tonto

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Mountain Lands Subtype
- RB Rural Bajada
- SB Suburban Bajada
- UB Urban Bajada
- IB Industrial Bajada
- RA Rural Arroyo
- SA Suburban Arroyo
- RFH Rural Foothills
- SFH Suburban Foothills
- IFH Industrial Foothills
- UFH Urban Foothills
- NPB Natural and Pastoral Bajada
- NPFH Natural and Pastoral Foothills
- NPA Natural and Pastoral Arroyo

Sonoran River Lands Subtype
- NPRC Natural and Pastoral River Channel
- NPRT Natural and Pastoral River Terrace
- SRT Suburban River Terrace
- SRC Suburban River Channel
- URT Urban River Terrace

Sonoran Valley Lands Subtype
- IVP Industrial Valley Plain
- NPVP Natural and Pastoral Valley Plain
- RVP Rural Valley Plain
- SVP Suburban Valley Plain
- IVRW Industrial Valley River & Washes
- RVRW Rural Valley River & Washes
- NPVRW Natural and Pastoral Valley River & Washes
- SVRW Suburban Valley River & Washes

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:
- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 6
Planned Future Landscape Character Units

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Stantec Consulting Inc.
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Planned Future Landscape Character Units
Tonto Landscape Character Type Units
Sonoran Arizona Upland Subtype
Rural Sonoran Arizona Uplands
Suburban Sonoran Arizona Uplands
Industrial Sonoran Arizona Uplands
Natural and Pastoral Sonoran Arizona Uplands
Upper Tonto Subtype
Natural and Pastoral Upper Tonto
Rural Upper Tonto
Sonoran Landscape Character Type Units
Sonoran Mountain Lands Subtype
Natural and Pastoral Foothills
Natural and Pastoral Arroyo
Rural Foothills
Rural Arroyo
Suburban Arroyo
Suburban Foothills
Urban Foothills
Industrial Foothills
Natural and Pastoral Bajada
Rural Bajada
Suburban Bajada
Urban Bajada
Industrial Bajada
Sonoran Valley Lands Subtype
Natural and Pastoral Valley River & Washes
Rural Valley River & Washes
Suburban Valley River & Washes
Industrial Valley River & Washes
Natural and Pastoral Valley Plain
Rural Valley Plain
Suburban Valley Plain
Industrial Valley Plain
Sonoran River Lands Subtype
Natural and Pastoral River Terrace
Natural and Pastoral River Channel
Suburban River Terrace
Suburban River Channel
Urban River Terrace

Table B
Planned Future Landscape Character Units

When considering the future landscape character of the study area, it is assumed that all LCU's will have similar visual character to the same existing units as they are currently exhibited within Maricopa County. These visual characteristics, stated in the PELCA, are landscapes seen in terms of form, line, color, texture, scale and composition.

Within the study area, the Planned Future LCUs dominant features vary from the existing LCU's. The Planned Future LCU's show the Natural and Pastoral Arizona Uplands in the Bradshaw Mountains and New River Mountains changing into a more rural residential development with some large areas of suburban development along I-17, Lake Pleasant and the northeast corner along New River. Some cultural modifications in this area include suburban development encroaching into the site from the south and east with some industrial mining along the central portion of the New River. The slopes of the bajada are typically gentle, which makes this unit very susceptible for residential development because of their attractiveness and gentle topography. The change is noticeable in the Natural and Pastoral Bajada to the south which has the potential to become more of a suburban development. Other planned modifications include future freeway development within the southern portion of the site. The future Loop 303 and New River Freeway will serve as connectors, providing access for the business parks to the west and northwest and will serve as a gateway to Peoria from the east. As for the future eastward extension of SR 74, north of the proposed New River Freeway interchange, this will need collaboration between the two Cities (Peoria and Phoenix) to determine an appropriate development mix as it relates to Phoenix's potential focus for a new airport.

2.3.7 Historic Landscape Character Overview

The historic landscape character is a function of the historic and cultural development over time that has shaped the current community character of the area. Some examples of historically and culturally significant features include cemeteries, institutional grounds, battlegrounds, and burial grounds. Many of the present day features were a result of these past influences. Thus, the historic and cultural Landscape Character of a place is the landscape which results from many generations of human occupancy. The National Park Service (Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes) defines a cultural landscape as:

> *"a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with an historic event, activity, or person or exhibiting other cultural or aesthetic values."*

The primary purpose of this section is to identify some of the known areas of significance: pre-historic, historic and/or cultural influence, within the Upper New River ADMP study area. The information gathered for this section comes primarily

from two resources; the first is the Cultural Resources Report prepared by EcoPlan Associates, Inc., the second is the Archeological Assessment prepared by Scientific Archeological Services. These documents were both prepared for the Upper New River ADMP. The purpose of this section is to examine the historical and cultural importance of the project site and use this information to develop historically inspired landscape themes that can be applied to the flood control structures within the Upper New River ADMP, thus remembering and preserving the historical and culturally significant areas for future generations.

As defined in the West Valley Rivers New River & Agua Fria Master Plan, per Maricopa Association of Governments (MAG), the New River represents a riparian ecosystem common to the Sonoran Desert Region of Arizona. This unique Corridor contains valuable geographic features, a rich diversity of plant and animal habitats, cultural and historic resources, and beautiful vistas.

2.3.7.1 Prehistory and History of the Project Area

Generally, Arizona has a rich and diverse cultural heritage. Native American groups have lived in the region for thousands of years. Settlers of European decent arrived in small numbers in the late 16th century and then in much larger numbers in the late 19th and early 20th centuries. Today this area is in proximity to one of the fastest growing regions in the United States.

This sites specific history dates back as early as 10000 B.C. to Paleo-Indian and Archaic traditions. This period was characterized by Indian inhabitants that were very skillful with lanceolate-shaped projectile points, which they used for hunting large game. The Clovis and Folsom cultures were two of the most distinctive traditions of this time period. Following these early inhabitants were that of the Cochise Indian cultures. The Cochise was defined by three distinctive periods including Sulfur Springs (7000-3500 B.C.), Chiricahua (3500-1500 B.C.), and San Pedro (1500-200 B.C.). The artifacts that define these periods include "a vast array of bifacially flaked tools, unused unifaces and by faces, food grinding implements, and of course, a host of distinguishing types of projectile points." (Rodgers 2007)

The predominant post-Archaic culture was that of the Hohokam Indians. The Hohokam Indians were characteristically "agriculturalists who not only developed intricate systems of both canal irrigation and floodwater farming, but they also augmented their cultivated produce with a diverse assortment of hunted game and collected plant foods." (Rodgers 2007) The Hohokam Indian culture remained in the area from approximately A.D. 300 until A.D. 1450. Following the Hohokam culture was a transition from prehistoric to historic times, this period, which dated from AD 1450-1534 is characterized by generally unidentified groups of Yavapai Indians. This group practiced hunter-gathering, following a pattern of seasonal mobility based on availability of natural and cultivated food resources. (EcoPlan

Associates, Inc. 2005) The final era from 1534-1952 is characterized by Anglo-American and Euro-American dominance. This era includes the following cultural themes: cadastral surveying, community growth and development, homesteading, canal and dam construction, and much roadway construction and use. (Rodgers 2007)

There are also a couple of major flood control structures that have impacted the historic landscape. The Adobe Dam and the New River Dam both created disruptions of the natural drainage flows changing the diversity of plantings and animal habitats. The Adobe Dam, completed in 1984, is located on Skunk Creek in northwest Phoenix, just west of Interstate 17 near Deer Valley Road. It was designed to protect residences along the new River in Phoenix, Glendale and Peoria from the effects of peak floodwater runoff in the river. The New River Dam, completed in 1985, is located on the New River northwest of the metropolitan Phoenix area. It is approximately a half-mile north of Jomax road and two miles east of Lake Pleasant Road. It was built to reduce peak flows in downstream portions of the New River, offsetting the effect of diverting flows from the Cave Creek drainage area to the New River via the Arizona Canal Diversion Channel.

At the end of the 19th Century, according to the New River Area Plan, New River was a vast empty land where native people who once roamed the countryside had moved on. This area was home to some scattered ranches such as T Ranch which still exists today. In the 1930's homesteaders began moving into the New River area and free land was available for the taking. Due to the lack of water, most people raised a few head of livestock and planted gardens. During the late 1940's electricity was brought into the area and by the early 1960's Black Canyon Highway became a freeway and New River was on its way to becoming a bustling bedroom community.

As roadways become established in remote areas and housing needs increase the flat lands within Maricopa County will likely become suburban developments. This can be seen toward the southern and eastern potion of the study area. Peoria and Phoenix, which are steady growth cities, are encroaching into the natural untouched landscapes. This area is mostly within the bajada with its mild slopes which are very compatible for suburban developments.

2.3.7.2 Review of Prehistoric & Historic Sites within the New River ADMP Study Area

Upper New River Drainage is dense with archeological areas with no fewer than 69 archeological sites that are known currently in the project locale. Of the 69, only 40 occur in the Upper New River ADMP project area. The 40 archival sites can be divided into two categories formal, those formally recorded by an archeologist affiliated with a particular research facility and informal sites, or

those that have yet been only informally recorded (Rodgers 2007). There are 30 of the sites that date to prehistoric era and of these 29 are represented by three cultural themes: residential life, resource exploitation, and agriculture. The remaining 10 of the 40 are believed to be from the historic era and include such cultural themes as cattle ranching, roadway transportation, community growth and development, homesteading, sheepherding, telephone communication and recreational camping, with cattle ranching being the most significant of the historic cultural themes within the project area.

There has been one archeological site of permanent residential life found within the project boundary. This site is popularly known as New River-Stricklin site such things as masonry rooms, different rock alignments, fire pits, petroglyphs, at least one possible human burial, and numerous loci of pottery sherds and stone artifacts are all found on this site. There has been much disturbance caused to this site due to local and interstate roadway construction and maintenance (Rodgers 2007).

2.3.7.3 Historic Landscape Character Zones

In order to have an understanding of the influences that previous cultures had with the physical and visual features within the Upper New River study area, zones were delineated based on previously stated information as well as research conducted about the project site. The following zones identify areas of the project site that may or may not have specific cultural aspects, but do play an important part in the history of the site:
The Zones can also be seen in Figure 10.

Zone 1 – Northern Tonto Lands/Forest
Zone 2 – Central Bajada Lands
Zone 3 – South/South Eastern Foothills
Zone 4 – Rivers and Washes

Each zone identifies some significant modern, prehistoric, historic and/or cultural development that has occurred within that zone, there has been little research done in some areas of the site so conclusions were made using the research and information available. These zones form a reference for designing appropriate, compatible, and representative flood control facilities that could depict a continuity of prehistoric to modern events within the future design solutions.

Zone 1 – Northern Tonto Lands/Forest

This area was out of the archeological and cultural reports study areas. There is no specific information regarding this area available to analyze. The northern study area near the Bradshaw Mountains and the New River

Boulder Creek
Agua Fria River
500 Kv Power Rd.
New River
FH 4
17
Zone 1
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Zone 4
Deadman Wash
Skunk Creek
New River Rd
070808_Fig 2_UNR_USDA_LC_Types.mxd
Agua Fria River
Beardsley Canal
74
New River Rd.
Zone 2
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Zone 3
Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Project Location
Gila Co.
La Paz Co.
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

HISTORIC LANDSCAPE CHARACTER ZONES

- Zone 1 - Northern Tonto Lands/Forest
- Zone 2 - Central Bajada Lands
- Zone 3 - South/SouthEastern Foothills
- Zone 4 - Rivers and Washes
- Washes and Arroyos

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 10
Historic Landscape Character

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Stantec

Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ U.S.A. 85044

Mountains has very little cultural disturbance, maintaining its historical natural and picturesque landscape. It is typified by the saguaro forests, small cacti, desert grass species, mesquite bosques, as well as riparian plant communities in the larger arroyos that include cottonwoods and sumac that are typical of the interior chaparral biome intermixed with Sonoran Desert species such as mesquite, palo verde, and ironwoods. Care should be taken when considering interpretation and appreciation of this area.

Zone 2 – Central Bajada Lands

This is the largest zone contained in the Upper New River ADMP and much of the area in this zone has not been studied for cultural or historically significant features. The areas that have been studied show a continuum of prehistoric through modern day occupation. This area is known to contain numerous prehistoric sites associated with rock alignments, mixed scatters, and shard all inhabited by prehistoric people and later abandoned. Some areas in this zone may have been used for agricultural purposes others for hunting and gathering. There were many sites from the historic period as well; these sites were used for such things as ranching, transportation routes, and homesteading.

Given the diversity of cultural and historic activities in this zone it may be apt for interpretation and appreciation of cultural resources to further the regional understanding of historic and prehistoric life in the Upper New River Drainage Area. Features such as educational trails can be potentially planned with a prehistoric theme along the drainage channel that could link into network extensive enough to connect with other regional trails.

Zone 3 – South / South Eastern Foothills

Only a relatively small portion of this zone is in the focus area and has therefore had historical and cultural research done specifically. Within this zone are a couple of sites with historical and cultural significance. These sites provide some evidence of previous human activity including hunting and gathering, agriculture, and artifact scatters.

It may be considered suitable for interpretation and appreciation of cultural resources to further the regional understanding of historic and prehistoric life in this zone.

Zone 4 – Rivers and Washes

This zone contains cultural and historical features that date from prehistoric to modern day. It can be characterized as an area that is contained primarily within the active wash corridor. The areas that were away from the drainage area were used for gathering wild plant foods, hunting small and large game,

residential life, resource exploitation and agricultural purposes. The majority of the sites were used as resource exploitation where features such as rock alignments, mixed artifact scatters, rock piles, roasting pits, shards and petroglyphs were all found. The historic features found within these sites include cattle ranching, homesteading, roadway transportation and telephone communication.

Given the diversity of cultural and historic activities in this zone it maybe apt for interpretation and appreciation of cultural resources to further the regional understanding of historic and prehistoric life in this zone.

2.3.7.4 Historic Landscape Treatments & Interpretation

Prior to planning or undertaking work on a flood protection structure within Upper New River ADMP project area it is important to identify and carefully study any sites of cultural and historic importance. Moreover, extreme care should be taken in maintaining and preserving the originality of the landscape and any features identified. The four primary treatments identified in the Secretary of the Interior's Standards for Treatment of Historic Properties (Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes) are:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the on going maintenance and repair of historic materials and features rather than extensive replacement and new construction. New additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical or cultural values.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape building, structure, or object for the purpose of relocating its appearance at a specific period of time and in its historic location.

Should any flood protection structure be planned in close vicinity to some historically and culturally significant areas, they can be beneficially utilized for landscape interpretation amongst other landscape aesthetic treatments.

Landscape interpretation, according to the National Park Service (Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes) is the process of providing the visitor with tools to experience the landscape as it existed during its period of significance, or as it evolved to its present state. These tools may vary widely, from a focus on existing features to the addition of interpretive elements. These could include exhibits, self-guided brochures, or a new representation of a lost feature. The nature of the cultural landscape, especially its level of significance, integrity, and the type of visitation anticipated may frame the interpretive approach. Landscape interpretation may be closely linked to the integrity and condition of the landscape, and therefore, its ability to convey the historic character and character-defining features of the past. If a landscape has high integrity, the interpretive approach may be to direct visitors to surviving historic features without introducing obtrusive interpretive devices, such as free-standing signs. For landscapes with a diminished integrity, where limited or no fabric remains, the interpretive emphasis may be on using extant features and visual aids (e.g., markers, photographs, etc.) to help visitors visualize the resource as it existed in the past. The primary goal in these situations is to educate the visitor about the landscape's historic themes, associations and lost character-defining features or broader historical, social and physical landscape contexts.

2.3.7.5 Historic Landscape Design Themes

Historically Designed Landscape is a landscape that is consciously designed or laid out according to design principles or in a recognized style or tradition (Preservation Brief 36: Protecting cultural Landscapes: Planning, treatment and management of Historic Landscapes). The landscape may be associated with a significant trend or event in history or illustrate an important development in the theory and practice of historic architectural design. Using the history and culture of the land to guide the development of the site will create place and enhance the overall design.

The existing cultural attributes from prehistory and history of this area will steer the development of the historically significant themes for the project. The trends that start to emerge after researching the history of the Upper New River Drainage Area are those of a significant past. This area is rich in culture and activities

including: game hunting, foraging, agriculture, basket creation, ceramic technology and later trapping, mountain men, gold mining, and homesteading. These will all play into the Historic Landscape Design Themes.

The historic landscape character themes identified below will form a reference for designing compatible flood control facilities that could depict a continuity of prehistoric to modern events. The following are some of the themes that could be explored for landscape and aesthetic treatment designs as part of this project:

Potential Prehistoric Elements for Theming:
Hunting and Gathering
Pottery
Petroglyphs

Potential Historic Elements for Theming:
Cattle Ranching
Transportation Corridors
Community Growth and Development
Homesteading
Sheepherding
Telephone Communication
Recreational Camping

2.4 Scenic Quality Assessment

The Scenic Quality Assessment helps determine the relative scenic value of the landscapes found within the Upper New River ADMP study area. This process involves underlining areas of high scenic quality that should be preserved and protected and identifying areas of low scenic quality that offer opportunities for enhancement or improvement.

The Scenic Quality Assessment consists of two components; evaluation of *Landscape Variety Classes* and identification of S*cenic Integrity Classes*. Both, the landscape variety classes and scenic integrity classes are derived from the existing landscape character assessment and are described below.

2.4.1 Landscape Variety Classes

2.4.1.1 Introduction

Landscape Variety Classes provide a measure of the overall scenic quality, attractiveness and importance of landscapes found within Maricopa County. Landscape Variety Classes are based upon the premise that all landscapes have

some scenic value, but those with the most distinctive variety have the greatest potential for high scenic appeal and value.

There are four Landscape Variety Classes that help to identify the overall scenic quality of the landscapes of Maricopa County:

Variety Class A+:	Very Distinctive Variety
Variety Class A:	Distinctive Variety
Variety Class B:	Common Variety
Variety Class C:	Minimal Variety

Variety Class A landscapes includes areas containing landforms, vegetation, rock formations, waters, cultural features or combinations thereof with distinctive or unusual variety. They are usually not common within those parts of the Sonoran Desert or Tonto Character types that comprise Maricopa County. Variety Class A may include landscape features that are unique to the character type and contribute significantly to its identity and unique sense of place. They include features that are recognized nationally or internationally and those that are protected under Arizona State laws or local ordinances. Examples of the latter include areas containing saguaro cactus (the signature plant of the Sonoran Desert), other protected native plant species and historically significant cultural features found in Maricopa County.

Variety Class A+ landscapes are those areas within the Variety Class A landscapes that have outstanding variety. A+ variety class landscapes have been assessed within this study only within the focus area where there is a potential to plan structural flood control alternatives and would necessitate the preservation of highly distinctive areas.

Variety Class B landscapes include areas with features that contain variety in their form, line, color, texture, scale or combinations thereof but which tend to be common throughout the character type and are not outstanding in scenic quality.

Variety Class C landscapes include areas with features that have little change in form, line, color and texture, and includes all areas not found under Classes A and B.

2.4.1.2 Scope and Methodology

The Landscape Variety Classes inventory and analysis contained in the Scenery Resource Assessment for Maricopa County is a county-wide regional assessment that is based upon an adaptation of the USDA Forest Service Visual Management System.[1] It is intended primarily to serve as a general guide and framework for

[1] *National Forest Landscape Management Volume 2, Chapter 1, The Visual Management System, Agriculture Handbook Number 462.* April, 1974, USDA Forest Service.

establishment of landscape variety classes in District planning studies and project designs and for limited use in the development and analysis of preliminary alternatives for planning studies.

The Landscape Character Types and Subtypes that have been identified and described in the Preliminary Existing Landscape Character Assessment for Maricopa County [2] were utilized as a frame of reference for judging the physical features of landscape areas as having distinctive, common or minimal variety. Features such as landforms, vegetation, water or rock formations were compared singularly or in combination with those commonly found within the Character Type.

Using this approach, the variety class rating criteria for the Sonoran Desert and Tonto Character Types contained in the USDA Forest Service publication titled Landscape Character Types of the National Forests in Arizona and New Mexico was adapted and modified for use in Maricopa County by the Flood Control District. Table C contains the rating criteria for the Sonoran Desert Character Type that was utilized for the Landscape Variety Classes inventory for Maricopa County.

These rating criteria were then utilized to determine the predominant overall degree of landscape variety for each of the Physical Divisions contained in the Existing Landscape Character Assessment for Maricopa County. Table D contains the Variety Class ratings for the physical divisions of the Sonoran Desert Character Type that were established from application of the Variety Class rating criteria in Table C. Table D indicates the predominant variety class rating that is expected within each physical division as well as a range of other ratings that may occasionally occur.

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[2] *Preliminary Existing Landscape Character Assessment for Maricopa County*, October 2, 2003, Flood Control District of Maricopa County, prepared by Environmental Planning Group, Inc.

SONORAN DESERT CHARACTER TYPE VARIETY CLASS RATING CRITERIA				
	Landform	**Vegetation**	**Water**	**Cultural Forms**
Variety Class A - Distinctive	Distinctive or highly varied topography. Includes craggy mountain peaks, sharp ridges, well defined foothills, bajadas, and interior mountain valleys. Isolated mountains, inselbergs, buttes, foothills, and rock formations with distinctive form or color contrast that become focal points. Deep gorges, ravines, or valleys with vertical or nearly vertical walls and/or unusual forms and color. Escarpments, cliffs, talus slopes, and other forms that dominate the surrounding landscape because of their scale, form, color, or texture.	Distinctive vegetation forms or highly varied vegetation patterns. Native cottonwood galleries and other riparian deciduous forests that exhibit the normal range of sizes, forms, species, colors, textures, edges, and patterns. Areas with saguaro or the paloverde-mixed cacti plant communities. Mesquite bosques and/or other mesophytic riparian hardwood stands that form distinctive linear patterns along dry washes and arroyos. Extra large or otherwise unique stands of vegetation.	Natural and manmade lakes and reservoirs. Primary and secondary river channels and terraces including, for example, the Hassayampa, Verdi, Agua Fria, Gila, Salt, New River, Cave Creek, Queen Creek. and many others. Arroyos and washes in the mountain lands and valley plains that contain sandy bottoms that are at least 8 feet wide. Hot springs and/or geothermal vents.	Architectural features with distinctive or unusual form, color, texture, materials, or scale that establishes a unique sense of place and positive variety in the landscape. Cultural features identified as having historical significance.
Variety Class B - Common	Terrain is moderately varied. Mountains and ridges that are surrounded by similar landforms and are not otherwise distinctive. Rock formations, foothills, and other landforms that remain subordinate to the surrounding landscape due to their size. Bajadas, volcanic fields, and upland areas with rolling topography that are not well defined by adjacent landforms.	Vegetation is moderately varied. Paloverde-mixed cacti plant communities that exhibit sub-normal range of sizes forms, colors, textures, and spacings. Creosote bush-bursage desert scrub combined in moderately defined patterns with desert pavement and/or rockland and/or mesophytic woodland. Creosote bush-bursage desert scrub combined with riparian deciduous woodland in patterns that offer some visual variety.	Water is moderately varied. Includes small arroyos and dry washes not otherwise identified.	Cultural forms are moderately varied. Areas with cultural features that offer some positive variety in form, color or texture.
Variety Class C - Minimal	Terrain is unvaried. Flat or nearly flat valley floors and plains.	Vegetation is unvaried. Extensive areas of similar vegetation such as creosote bush-bursage that have very limited variation in form, color, texture, or pattern.	Water is absent.	Cultural forms are absent or unvaried. Extensive areas of cultural features that offer little variation in form, color, or texture.

Table C
Sonoran Desert Character Type Variety Class Rating Criteria

PREDOMINANT VARIETY CLASS RATINGS FOR THE PHYSICAL DIVISIONS OF THE SONORAN DESERT CHARACTER TYPE			
Landscape Character Type, Subtype, and Physical Division	**Landscape Variety Classes**		
	A	**B**	**C**
Tonto Character Type			
Sonoran Arizona Uplands Subtype	Refer to Tonto National Forest VRM Inventory		
Upper Tonto Subtype	Refer to Tonto National Forest VRM Inventory		
Sonoran Desert Character Type			
Riverlands Subtype			
River Channel	X		
River Terrace	X	(X)	
Valleylands Subtype			
Valley Rivers and Washes	X		
Valley Plains	(X)	(X)	X
Mountainlands Subtype			
Arroyo	X		
Bajada			
Upper	X		
Lower	(X)	X	
Foothills	X	(X)	
Mountains	X		
Interior Valley	X		
Volcanic Field		X	(X)
Key:			
X = Predominant Variety Class			
(X) = Occasional Variety Class			
Blank = Seldom, if ever, Variety Class			

Table D
Predominant Variety Class Ratings for the Physical Divisions of the Sonoran Desert Character Type

Table D was then used in GIS to produce the Landscape Variety Classes map for Maricopa County. The resulting variety class map was then used as a basis for establishment of flood protection method compatibility classes for the Upper New River ADMP study area.

Areas of Maricopa County situated within the Tonto Character Type were not included in the Landscape Variety Class inventory and analysis for the county-wide assessment. For the purposes of Upper New River Scenic Quality assessment, these areas were evaluated as an extension of the Sonoran Desert. They were given a similar rating as the mountains and upper bajada landscape because lands within the Tonto Character Type most closely resemble these two Physical Divisions of the Sonoran Desert Character Type.

2.4.1.2 Landscape Variety Class Assessment for Existing Landscape Character Units and Subunits

Within the Upper New River ADMP study area, identification of Landscape Variety Classes is carried out for all the existing landscape character units and subunits based on information provided in Table D above. The variety class ratings for lands within UNR are displayed in Table E and are illustrated on a map (Figure 7) followed by a description.

General Landscape Variety Class Ratings for Maricopa County Flood Control District of Maricopa County				
Landscape Character Type,		**Landscape Variety Classes**		
Sub-Type and Physical Division	**A+**	**A**	**B**	**C**
Tonto Landscape Character Type				
Sonoran Arizona Uplands Subtype				
Natural and Pastoral Sonoran Arizona Uplands		X	(X)	(X)
Industrial Sonoran Arizona Uplands		X	(X)	(X)
Suburban_Sonoran Arizona Uplands		X	(X)	(X)
Rural Sonoran Arizona Uplands		X	(X)	(X)
Upper Tonto Subtype				
Natural and Pastoral Upper Tonto		X	(X)	(X)
Sonoran Desert Character Type				
Mountainlands Subtype				
Natural and Pastoral Foothills		X	(X)	
Rural Foothills		X	(X)	
Suburban Foothills		X	(X)	
Industrial Foothills		X	(X)	
Natural and Pastoral Upper Bajada		X	(X)	
Desert Wash	X	(X)		
Dense Vegetation	X	(X)		
Mining		X	(X)	
Rural Upper Bajada		X	(X)	
Suburban Upper Bajada		X	(X)	
Master Planned Community (Desert)		X	(X)	
Industrial Upper Bajada		X	(X)	
Mining		X	(X)	
Natural and Pastoral Arroyo		X		
Rural Arroyo		X		
Suburban Arroyo		X		
Valleylands Subtype				
Natural and Pastoral Valley Plain		(X)	(X)	X
Rural Valley Plain		(X)	(X)	X
Suburban Valley Plain		(X)	(X)	X
Industrial Valley Plain		(X)	(X)	X
Natural and Pastoral Valley River & Washes		X		
Desert Wash	X	(X)		
Rural Valley River & Washes		X		
Suburban Valley River & Washes		X		
Industrial Valley River & Washes		X		
Mining		X		
Riverlands Subtype				
Natural and Pastoral River Terrace		X	(X)	
Suburban River Terrace		X	(X)	
Natural and Pastoral River Channel		X		

Table E

Variety Class Ratings for the Existing Landscape Character Units & Sub-Units

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Agua Fria River
Beardsley Canal
74
New River Rd.
Deadman Wash
Skunk Creek
New River Rd
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Project Location
Gila Co.
La Paz Co.
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

- Class A+
- Class A
- Class C

General Landscape Variety Class Ratings for Maricopa County
Flood Control District of Maricopa County

Landscape Character Type / Sub-Type and Physical Division	Landscape Variety Classes A+	A	B	C
Tonto Landscape Character Type				
Sonoran Arizona Uplands Subtype				
Natural and Pastoral Sonoran Arizona Uplands		X	(X)	(X)
Industrial Sonoran Arizona Uplands		X	(X)	(X)
Suburban Sonoran Arizona Uplands		X	(X)	(X)
Rural Sonoran Arizona Uplands		X	(X)	(X)
Upper Tonto Subtype				
Natural and Pastoral Upper Tonto		X	(X)	(X)
Sonoran Desert Character Type				
Mountainlands Subtype				
Natural and Pastoral Foothills		X	(X)	
Rural Foothills		X	(X)	
Suburban Foothills		X	(X)	
Industrial Foothills		X	(X)	
Natural and Pastoral Upper Bajada		X	(X)	
Desert Wash	X	(X)		
Dense Vegetation	X	(X)		
Mining		X	(X)	
Rural Upper Bajada		X	(X)	
Suburban Upper Bajada		X	(X)	
Master Planned Community (Desert)		X	(X)	
Industrial Upper Bajada		X	(X)	
Mining		X	(X)	
Natural and Pastoral Arroyo		X		
Rural Arroyo		X		
Suburban Arroyo		X		
Valleylands Subtype				
Natural and Pastoral Valley Plain		(X)	(X)	X
Rural Valley Plain		(X)	(X)	X
Suburban Valley Plain		(X)	(X)	X
Industrial Valley Plain		(X)	(X)	X
Natural and Pastoral Valley River & Washes		X		
Desert Wash	X	(X)		
Rural Valley River & Washes		X		
Suburban Valley River & Washes		X		
Industrial Valley River & Washes		X		
Mining		X		
Riverlands Subtype				
Natural and Pastoral River Terrace		X	(X)	
Suburban River Terrace		X	(X)	
Natural and Pastoral River Channel		X		

Key:
X = Predominant Variety Class
(X) = Occasional Variety Class
Blank = Seldom, if ever, Variety Class

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:
- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 7

Landscape Variety Classes

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A majority of the Upper New River study area falls under Variety Class A. These landscapes include the Sonoran Arizona Uplands and the barren mountains (e.g. New River and Bradshaw), their associated foothills and bajada lands; and the many rivers, arroyos and washes.

Within the Sonoran desert in Maricopa County, mountainous ranges stand out visually from the surrounding flat landscape. These areas are distinctive compared to the lower desert areas for their variety in form and vegetation density. The bajada lands, which constitute a major portion within the Upper New River study area, are also distinctive as their rolling topography associated with the mountain lands provides interest in the landscape. The variety of vegetation density is perhaps the most striking feature of these lands. Saguaro cacti, a signature feature of the Sonoran Desert, are both visually and culturally significant. The washes and arroyos within the study area are also of great significance, primarily for the vegetative and landform variety that they provide in the typically flat landscapes of the Sonoran Desert. On account of this significance, desert washes and densely vegetated areas around those washes were mapped as subunits and were categorized as Variety Class A+ with the Upper New River study area.

There are no Variety Class B landscapes found within the Upper New River study area.

Variety Class C landscapes comprises of a very minimal area within the Upper New River study area. The Landscape Variety Class C is represented mainly by the Valley Plains that exhibit very limited variety in landform, rock form, texture, and/or vegetation. These areas are usually flat and with uniform or no vegetation and lack elements of high visual interest.

2.4.2 Scenic Integrity Assessment

2.4.2.1 Introduction

As mentioned earlier, Scenic Quality is exhibited by the combination of valued natural elements and modified cultural elements that make up the landscape. Scenic Integrity Assessment is another indication of the overall scenic quality and by definition it indicates the degree to which a landscape is perceived to be visually intact, whole or complete. Scenic integrity evaluates the degree to which landscapes are visually disrupted or reveal deviation from the characteristic form, line, color, and/or texture of the scenic natural or cultural features valued for its aesthetic appeal within the study area.

For the purposes of this project, Scenic Integrity Classes are categorized as High Scenic Integrity or Low Scenic Integrity depending on the presence or absence of discordant features. This implies that a landscape with very minimal visual disruption is considered to have High Scenic Integrity where as those landscapes

that have increasingly discordant relationships among scenic attributes are viewed as having diminished or Low Scenic Integrity.

However, it should be noted that while areas of high scenic integrity suggest a higher landscape value and that their character should be preserved, areas of low scenic integrity shall not imply less overall landscape value. In fact, low scenic integrity areas present opportunities for improvement through future management and design decisions. During implementation, it is recommended that low scenic integrity landscapes should be either restored to its natural or cultural look and feel using a suitable landscape theme or may even be turned into a multi-use recreation feature for use by local citizens.

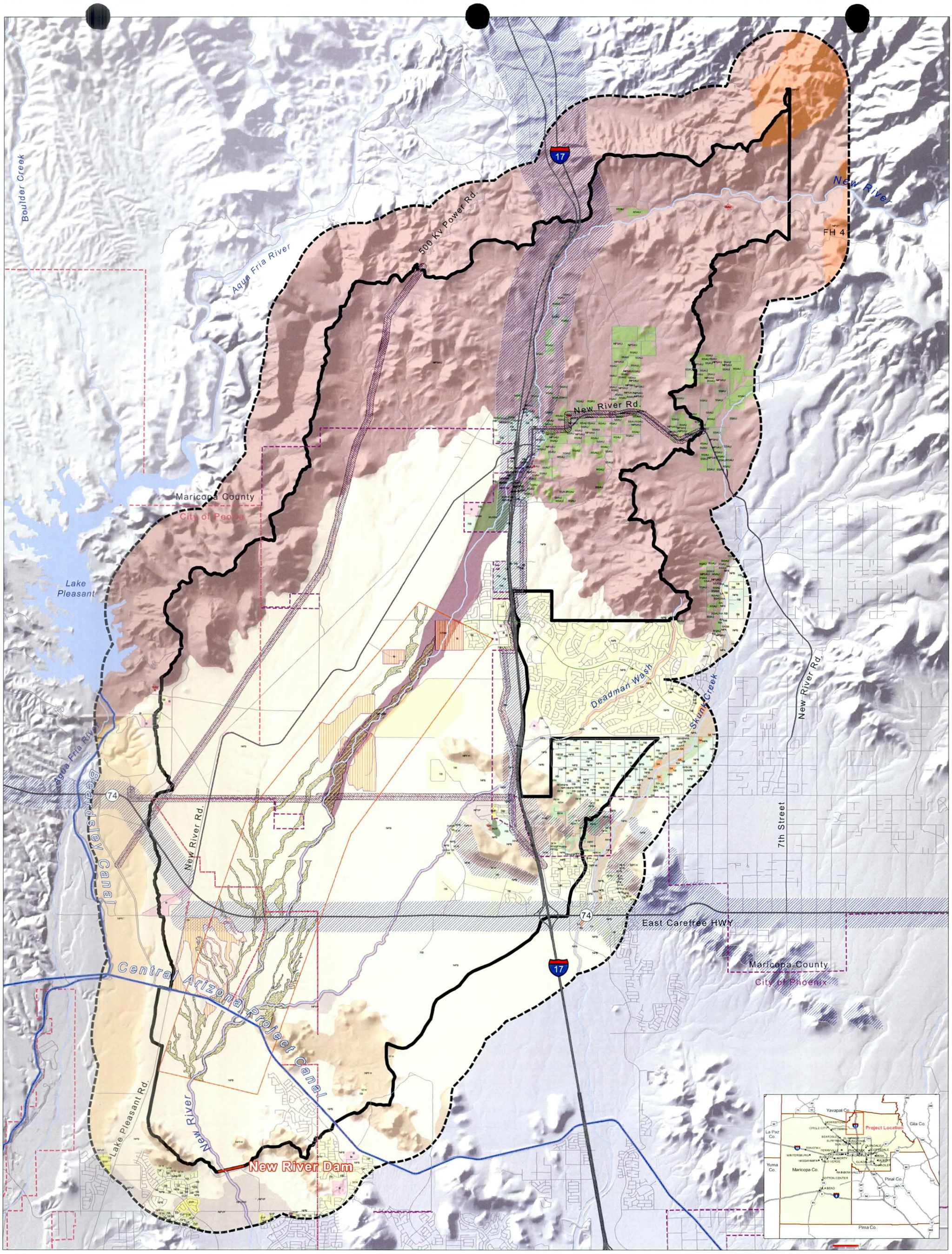
As structural solutions were to be planned only within the focus areas, scenic integrity was mapped only within those areas in two classes; High (natural and unaltered landscapes) and Low (disturbed and altered landscapes). Figure 8 illustrates the scenic integrity mapping within the focus areas of the Upper New River ADMP study area.

2.4.2.2 Scenic Integrity Assessment for Existing Landscape Character

High Scenic Integrity

These areas are described as distinctive regions where landform, vegetation patterns, water characteristics and cultural features combine to provide unusual, unique or outstanding scenic quality. These landscapes have strong positive attributes of variety, unity, harmony, pattern and balance.

High Scenic Integrity areas within the Upper New River ADMP study area are located along natural and pastoral valley rivers and washes and along the several arroyos in the natural and pastoral bajadas. Vegetation diversity and density, and landscape quality and integrity along these areas may be high due to water retention during storm or flood events. These areas are characterized by dense vegetation which typically includes Mesquite, Hackberry, Catclaw Acacia, Ironwood and Palo Verde trees. These areas are rated as High Scenic Integrity since they also provide potential habitats and refuge to a wide variety of wildlife. Since these areas are visually intact and lack discordant



LEGEND

SCENIC INTEGRITY CLASSES

- High Scenic Integrity
- Low Scenic Integrity
- Scenic Routes
- Power Corridor - 300ft Buffer

TONTO LANDSCAPE CHARACTER TYPES:

Sonoran Arizona Upland Subtype

- ISAU Industrial Sonoran Arizona Uplands
- NPSAU Natural and Pastoral Sonoran Arizona Uplands
- RSAU Rural Sonoran Arizona Uplands
- SSAU Suburban Sonoran Arizona Uplands

Upper Tonto Subtype

- NPUT Natural and Pastoral Upper Tonto

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Valley River Lands Subtype

- NPRC Natural and Pastoral River Channel
- NPRT Natural and Pastoral River Terrace
- SRT Suburban River Terrace

SONORAN LANDSCAPE CHARACTER TYPES:

Sonoran Mountain Lands Subtype

- NPB Natural and Pastoral Bajada
- NPFH Natural and Pastoral Foothills
- NPA Natural and Pastoral Arroyo
- RB Rural Bajada
- RFH Rural Foothills
- RA Rural Arroyo
- SA Suburban Arroyo
- SB Suburban Bajada
- SFH Suburban Foothills
- IFH Industrial Foothills
- IB Industrial Bajada

Sonoran Valley Lands Subtype

- IVP Industrial Valley Plain
- NPVP Natural and Pastoral Valley Plain
- RVP Rural Valley Plain
- SVP Suburban Valley Plain
- NPVRW Natural and Pastoral Valley River & Washes
- RVRW Rural Valley River & Washes
- SVRW Suburban Valley River & Washes
- IVRW Industrial Valley River & Washes

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 8
Scenic Integrity

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features, all efforts should be made to preserve their unique scenic qualities, if any flood protection facilities are planned in the vicinity.

Low Scenic Integrity

These areas are described as landscapes that have low scenic quality and they have either little or missing attributes of variety, unity, pattern and balance. Not only water and rock form of any consequence is missing, they may also be scarred and need repair to restore it to some visually appealing form.

Within the Upper New River ADMP study area, low scenic integrity areas are found along the sides of the Valley Rivers and Washes. Traces of disturbed lands that visually disrupt the existing landscape character of the Sonoran desert are evident. Within the study area, the blanched areas are primarily associated with industrial activities or lack of vegetation or degraded on account of heavy vehicular traffic (ATV and/or RV). Other industrial activities are associated with landfill or mining operations, thus showing disturbance and deviation from the immediately surrounding original scenic landscape. This can be seen here in the adjacent picture showing the landfill transfer station for New River. Also, removal of sand and gravel product from the river floodplain leaves large scars in the landscape that seriously impact the landscape character of the area. These areas were therefore categorized as low scenic integrity, especially since they negatively impact the visual beauty of the otherwise pristine landscape.

As mentioned earlier, low scenic integrity areas provide opportunities for improvement. So, even though they demand restoration and may require management and/or enhancement, they can be treated and developed to provide an environment conducive for year round multi-use and recreation activities. They can also be camouflaged by natural looking screening and buffering techniques.

2.5 Visual Sensitivity Assessment

2.5.1 Visual Sensitivity Levels

Visual Sensitivity Levels provide a measure of people's concern for the visual character and beauty of landscapes within Maricopa County. Visual Sensitivity Levels take into account the numbers and types of viewers, their concern for the visual environment, and the relative visibility of landscape areas within Maricopa County.

It is recognized that most of Maricopa County is situated within the Basin and Ranges Physiographic Province and is predominantly a large panoramic feature landscape that characteristically affords mostly unobstructed views of its valley floors, rivers and isolated mountain ranges. It is further recognized that virtually all of Maricopa County is visible at least by aircraft users. Therefore, some degree of visual sensitivity exists for the entire land base of the county.

There are three Visual Sensitivity Levels. Each level identifies a different level of user concern for the visual environment.

Level 1 – Highest Sensitivity
Level 2 – Average Sensitivity
Level 3 – Lowest Sensitivity

Viewing Distance Zones

The Sensitivity levels are further stratified into viewing distance zones during the process of visibility mapping. The viewing distance zones include the following:

Viewing Distance Zone	Near Boundary	Far Boundary
Foreground	0 mile	¼ mile
Middleground	¼ mile	3 miles
Background	3 miles	Infinity

Viewer Concern Levels

Viewer concern for the visual environment is expressed as either major or minor. Viewers with major concern typically include people who are driving for pleasure and viewing scenery, hiking trails or engaged in recreation activities in which the quality of the visual environment is an essential component of their experience, and residents traveling within a local community. Viewers with minor concern for landscape aesthetics are typified by people traveling through an area for commercial purposes or daily commuter travel. There are three viewer concern

levels based upon the degree to which viewers with major concerns are estimated to be represented in each travelway category on average daily:

High:
75 percent or more viewers have major concerns for the visual environment

Moderate:
25-75 percent of Viewers have major concerns for the visual environment

Low:
Less than 25 percent of viewers have major concerns for the visual environment

Travelways Inventory

The inventory of travelways in Maricopa County was developed to serve as a basis for establishment and mapping of Visual Sensitivity Levels for travel routes within the county and was utilized as the resource data for the Upper New River ADMP Scenery Resource Assessment. The travelways shown on countywide mapping were identified and mapped utilizing GIS data obtained from the District who had in turn obtained data from the Maricopa County Department of Transportation. A merged GIS coverage was created that contained both roadway and trails data. The trails data in this coverage is limited to the Maricopa Regional Trail System at this time. Also, the travelways map does not include railway lines at this time. Nor does it include aircraft take off and landing flight paths from major airports within Maricopa County.

Primary and Secondary Route Designations

Travel routes in the inventory were categorized as being of either primary or secondary importance within Maricopa County based upon their general their type and levels of use. These designations were based upon an interpretation of the criteria outlined in the publication titled National Forest Landscape Management Volume 2, Chapter 1, The Visual Management System, Agriculture Handbook Number 462, USDA Forest Service, April, 1974.

Primary travel routes typically include roads and trails having national, statewide or regional importance, high use levels and long use duration. Secondary travel routes typically include roads and trails having local significance, low use volume and/or short use duration.

2.5.2 Establishment of Visual Sensitivity Levels

Visual Sensitivity Levels were identified for each travelway in the inventory using the Summary Table for Visual Sensitivity Levels shown below in Table F, which was excerpted from Agriculture Handbook 462.

SUMMARY TABLE FOR VISUAL SENSITIVITY LEVELS			
Importance /Use Level	**Sensitivity Level**		
	1	**2**	**3**
Primary Travelway	At least 25 percent of users have major concerns for scenic resources.	Less than 25 percent of users have major concerns for scenic resources.	
Secondary Travelway	At least 75 percent of users have major concerns for scenic resources.	25 to 75 percent of users have major concerns for scenic resources.	Less than 25 percent of users have major concerns for scenic resources.

Table F
Summary Table for Visual Sensitivity Levels

The Viewer Concern Levels and Visual Sensitivity Level ratings that have been identified for travelways in Maricopa County are shown below in Table G. These ratings reflect the viewer concern levels and visual sensitivity levels that are most typical, prevalent or expected within Maricopa County. Exceptions can and do occur (see note attached to table).

VISUAL SENSITIVITY LEVELS RATINGS FOR TRAVELWAYS IN MARICOPA COUNTY						
	Viewer Concern Levels for Aesthetics			**Visual Sensitivity Level**		
Travelway Importance	**High**	**Moderate**	**Low**	**1**	**2**	**3**
Primary Roads						
Interstate Highway		*		*		
Freeway		*		*		
State Highway		*		*		
Other Divided Highway		*		*		
Arterial Streets (paved)	*/1			*/1		
Arterial Streets (unpaved)	*/1			*/1		
Scenic Route	*			*		
Trails						
Maricopa Regional Trail System	*			*		
Secondary Roads						
Collector Streets	*/1			*/1		
All Other Streets and Roads			*			*
Scenic Route	*			*		
Trails						
All Other Trails	*			*		
/1 Exceptions to Sensitivity Levels Ratings: Arterial and Collector streets located within Industrial Landscape Character Cultural Settings usually have low viewer concern levels and are typically rated as Visual Sensitivity Level 3.						

Table G
Visual Sensitivity Levels Ratings for
Travelways in Maricopa County

2.5.3 Visual Sensitivity Levels Mapping

The Visual Sensitivity Levels map for Maricopa County was prepared by buffering all of the Primary travelways and the Collector streets in the Secondary category in GIS. The buffering was done at ¼ mile and 3 miles distance from each of the aforementioned travelways to represent the Foreground, Middleground and Background viewing distance zones.

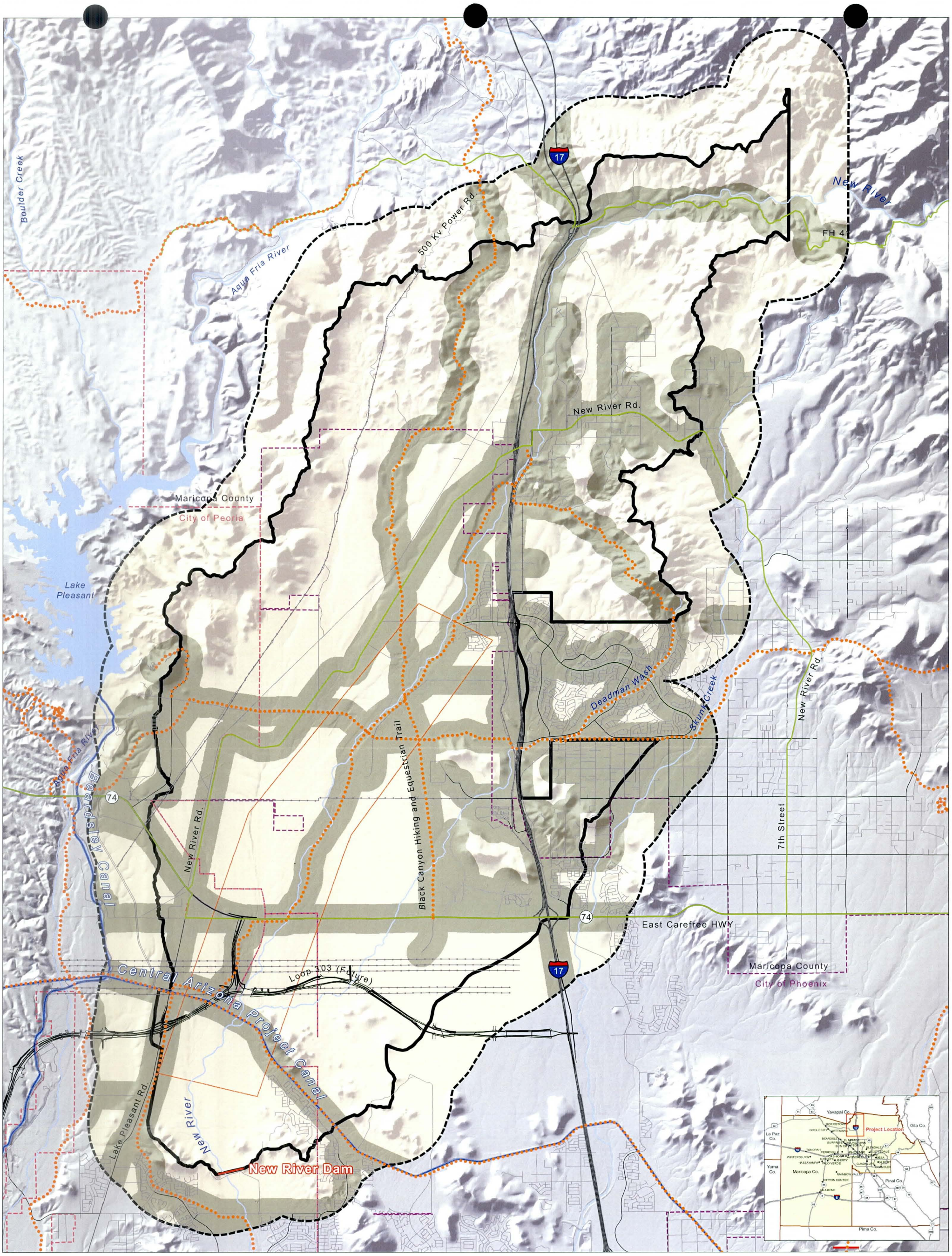
The approach taken in the mapping assumes that virtually all landscape areas in Maricopa County are visible from travelways classified as Visual Sensitivity Levels 1. For this reason, travelways classified as Visual Sensitivity Level 2 and Level 3 in Maricopa County were not mapped as a part of this project. The above assumption is expected to hold true in most parts of the county that are situated within the Sonoran Desert Landscape Character Type. It may not hold true for portions of the county situated within the Tonto Landscape Character Type where the topography is more varied. However, for the purpose of Upper New River ADMP, the assumption remains the same as Sonoran Desert Landscape Character Type. Therefore, end users of this product should recognize its current inherent limitations.

2.5.4 Travelways and Visual Sensitivity Levels within the Upper New River Study Area

The major travelways assigned as Sensitivity Level 1 within the Wittmann Study Area are identified in below:

- I-17
- SR-74
- FH4
- Portions of Maricopa County Regional Trails
- Central Arizona Project
- New River Road/99th Avenue
- Lake Pleasant Road
- Jomax Road
- Table Mesa Road
- Future Loop 303

By applying the assessment methodology outlined above to these travelways using GIS, the Travelways Viewer Sensitivity Levels map for the Upper New River study area was created (Figure 9). The map shows that the entire Upper New River study area is either within the Foreground of a Sensitivity Level 1 travelway or in the Middleground of a Sensitivity Level 1 travelway.



LEGEND

VISUAL SENSITIVITY FEATURES

- Interstate
- Freeways
- State Highway
- Divided Highway
- Arterial (paved)
- Arterial (unpaved)
- Collector (unpaved)
- Collector (paved)
- Scenic Route
- Regional Trails

TRAVELWAY VISUAL SENSITIVITY

- Foreground Visual Sensitivity Level 1
- Middleground Visual Sensitivity Level 1

SUMMARY TABLE FOR VISUAL SENSITIVITY LEVELS

Importance/ Use Level	Sensitivity Level 1	2	3
Primary Travelway	At least 25 percent of users have major concerns for scenic resources.	Less than 25 percent of users have major concerns for scenic resources.	
Secondary Travelway	At least 75 percent of users have major concerns for scenic resources.	25 to 75 percent of users have major concerns for scenic resources.	Less than 25 percent of users have major concerns for scenic resources

VISUAL SENSITIVITY LEVELS RATINGS FOR TRAVELWAYS IN MARICOPA COUNTY

Travelway Importance	Viewer Concern Levels for Aesthetics: High	Moderate	Low	Visual Sensitivity Level: 1	2	3
Primary Roads						
Interstate Highway		*		*		
Freeway		*		*		
State Highway		*		*		
Other Divided Highway		*		*		
Arterial Streets (paved)	*/1			*/1		
Arterial Streets (unpaved)	*/1			*/1		
Scenic Route	*			*		
Trails						
Maricopa Regional Trail System	*			*		
Secondary Roads						
Collector Streets	*/1			*/1		
All Other Streets and Roads			*			*
Scenic Route	*			*		
Trails						
All Other Trails	*			*		

/1 Exceptions to Sensitivity Levels Ratings: Arterial and Collector streets located within Industrial Landscape Character Cultural Settings usually have low viewer concern levels and are typically rated as Visual Sensitivity Level 3.

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 9
Existing Visual Sensitivity Levels for Travelways

P:\2006\062200034.01\GIS\Mxd_Files\070808_updated_Final RRA_SRA\070810_Fig 8_UNR_ExVS_travelways.mxd

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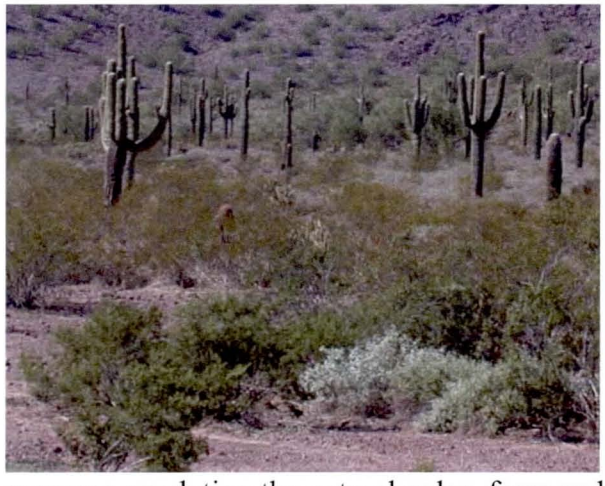
2.6 Potential Landscape Design Themes

By planning and designing flood control facilities in a manner that emulates the visual characteristics of the positive physical attributes associated with natural and/or culturally modified settings, the flood control facilities will seek to complement and/or enhance the valued landscape character.

Existing information from the Landscape Character Analysis is utilized to develop Landscape Design Themes appropriate to the study area. They are intended to be applied to the alternative systems that will be planned for the rehabilitation of the Upper New River study area. Listed below are some potential landscape themes that can be molded into any of the flood protection methods that will be discussed in Section 3.1. The following are the descriptions that explain their characteristics and unique features:

Natural Desert Theme



The Natural Landscape Theme is associated with the untouched Sonoran Desert area and would reinforce the native Sonoran Biotic Community through; matching native plantings, maintaining open views, utilizing native material for trails and paths and mimicking the rolling topography of the surrounding native desert. The Natural Landscape Theme should also restore and preserve natural beauty and provide a unique visual resource emulating the natural color, form and texture that complements the surrounding desert landscape. Within this theme there maybe the presence of braided streams and natural low flow channels with sandy bottoms. The vegetation should be used to soften, screen and blend; engineered slopes, grade control structures, energy dissipaters and inlet/outlet structures. To soften some of the engineered landforms dams, basins or channels can be constructed with earthen material and natural vegetation that blend into graded areas which can be graded with soft edges and take on the appearance of rolling topography with visual variety.

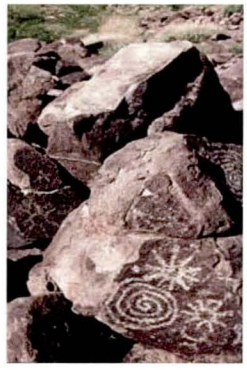
Enhanced Desert Theme

The Enhanced Desert Landscape Theme focuses on using native vegetation with accent planting for areas that have been disturbed and are located in a natural landscape setting. The planting should be enhanced with plantings missing due to off road vehicles and existing proving grounds. Similar to the Natural Theme, the Enhanced Theme should use natural construction materials which include boulders, river rock and gravel surface treatment in combination with vegetation for pathways, trails, seating erosion control, and dust control. Provide structural components that blend into the topographic forms for example, side weirs, spillways, energy dissipaters and inlets should have soft edges providing natural looking structures with arched and stepped drop structures as opposed to baffle block designs. The vegetation within this theme would typically be 80% Native with 20% enhanced native that may include the following species; Jojoba, Agave, Brittle Bush, Desert Spoon, Penstimen, Yucca, Prickly Pear, Cholla, Sugar Bush, Mormon Tea, Mesquite, Ironwood, Palo Verde, Hackberry, Acacia and Desert Willow.

Desert Oasis Theme

The Desert Oasis theme is associated with developments that match the desert along their edges but incorporate oasis type plantings for multi-use areas such as golf course greens or small pocket parks. The Desert Oasis Theme may incorporate large pockets of native shade trees, passive recreational features and free flowing landforms which complement the surrounding Sonoran landscape. The basins and channels may be vegetated with grass and pockets of oasis planting to create both, shade and screening of visible hard structures. This also helps to create transitioning between native planting and existing landforms. The vegetation is 70% native planting, 30% enhanced near native planting with ornamental accents and native grass species.

Riparian Theme (Prehistoric/Historic)



The Riparian Theme is based on cultural, historical and natural features to be implemented in areas along New River and washes in the within the study area. This area is also primarily contained within the active wash areas. The areas away from the drainage area were used more for gathering and hunting, residential life, resource exploitation and agricultural proposes. Other historic elements include mixed artifact scatters, rock pikes and petroglyphs. This theme can be reinforced with riparian vegetation and interpretive elements such as signage, artifacts and displays that can convey the historical significance of the project area. For example, the rocks can carry the impression of petroglyphs reminiscent of the cultural influence of the Hohokam Indians. Overall, the concept lacks defined boundaries, sharp grade changes and angular forms while the channel floor will be undulating with riparian planting that grow typically in the wash areas (Bursage, Creosote, etc.)

3.0 SCENERY RESOURCE COMPATIBILITY ANALYSIS

The Scenery Resource Assessment for Maricopa County includes assessments of the relative compatibility of scenery resources with a variety of flood protection methods that are routinely applied by the District in delivering flood protection services and facilities to the citizens of Maricopa County. Included in this section are the following compatibility analyses that tier from the Scenic Resource Assessment for Maricopa County and are updated by EDAW as part of Final SRA wherever necessary:

- Existing Landscape Character Compatibility (Updated With Sub-Units)
- Planned Future Landscape Character Compatibility
- Landscape Variety Class Compatibility (Updated With Sub-Units)
- Visual Sensitivity Levels Compatibility

It should be noted that these compatibility analyses are intended to be combined together into a composite scenery resource compatibility analysis. Each of these layers has been provided in this study in order to illustrate the process and method whereby the composite mapping has been generated. Layered together, these analyses provide a composite analysis of flood protection methods and their compatibility within the study area, thus identifying where opportunities for preserving or enhancing the scenic resources exists. Conversely, it also identifies areas within the study area where the scenic value of the landscape may be compromised by the use of incompatible structural flood protection methods. It also highlights areas within the landscape where if an incompatible flood protection method is used; extraordinary aesthetic treatment measures will be required in order to implement the facility to be compatible with the existing or planned setting. No single compatibility map should be used independently for flood protection planning. All compatibility maps should be reviewed.

Based on the information above, the following two Scenery Resource Compatibility analyses will be developed:

- Existing Scenic Resource Compatibility (Updated With Sub-Units)
- Future Scenic Resource Compatibility

Additionally, there is a tendency to utilize the Planned Future Landscape Compatibility analysis over the Existing Landscape Character Compatibility analysis and the corresponding Scenery Resource Compatibility Analyses when planning for the future conditions of the study area. It should be noted that the Existing Landscape Character mapping is based on actual site conditions while the Planned Future Landscape Character mapping is based on much less reliable and changing MAG General Plan data. Utilization of the existing mapping, i.e. Existing Scenic Resource Compatibility is thus a much more reliable source of data and as such will be used as the final mapping for Upper New River ADMP Scenery Resource Analysis.

3.1 Flood Protection Methods

Listed below are six different flood protection methods that are commonly implemented by the District to deliver flood protection services and facilities to the citizens of Maricopa County. The flood protection methods include both non-structural (regulatory) and structural methods. The structural methods typically include construction of large scale conveyance channels, storage basins, flood retarding structures and dams. The following is a brief description of the six flood protection methods:

Non-Structural Method

The non-structural method of flood protection employs the use of regulatory mechanisms such as erosion setback zones and zoning regulations as a mechanism for providing flood protection. Structural elements or facilities are absent and the existing character of the landscape is usually preserved under this method. Exceptions may include provision of low standard road facilities for carrying out flood control operations and maintenance activities within the area. Upper Cave Creek is an example of a drainage feature to which the District has applied this method.

Soft Structural Method

The soft structural method includes construction of flood protection structures, such as conveyance channels, storage basins and flood retarding structures, utilizing earthen materials. Hard structural components are either non-existent or are buried or concealed so as not to be visually evident to the average viewer. Soft structural facilities can be designed to complement the visual characteristics of a wide range of landscape settings in Maricopa County. They may, for example, be designed to emulate the

visual characteristics of natural landscapes or to complement the visual characteristics of pastoral, rural and suburban settings that may be highly valued by local communities. The soft structural method also offers large potential for introducing positive variety and relief into culturally dominated settings, including urban and industrial landscapes. The District's Old Cross Cut Channel project in the City of Phoenix, Freestone Park in the Town of Gilbert, and Falcon Dunes Golf Course near Luke Air Force Base are representative of flood protection facilities that illustrate many of the positive characteristics of the soft structural method.

Semi-Soft Structural Method

The semi-soft structural method is similar in many respects to the soft structural, except for the introduction of structural components that are a functional part of the flood protection facility that are visually evident. Examples of such components could include grade control structures, energy dissipaters, low flow features, inlet and outlet structures. These structural components can often be designed to remain visually subordinate to, and complement, the desired character of the settings in which they are located through careful placement, materials usage, and careful design of their overall form. The semi-soft structural method also has a large potential for introducing positive variety into culturally dominated landscape settings. The segment of Indian Bend Wash located north of the McDowell Street overpass in the City of Scottsdale includes a drop structure, architectural water features and a sharply edged meandering low flow channel that provides a positive example of the semi-soft structural method in a suburban park-like setting.

Hard Structural Method with Aesthetic Treatment

The hard structural method with aesthetic treatment includes large-scale concrete lined channel facilities and other structural components that are visually dominant within most landscape settings of Maricopa County. This method incorporates aesthetic treatments such as: gracefully meandering the form of a channel in the landscape; use of color, textural patterns, urban art and other architectural embellishments to establish visual and cultural context sensitivity and a unique sense of place within local communities. This method also includes a landscape

buffer zone on both sides of the structure with attractive grading and landscape planting to create an effective visual transition with adjacent properties and streetscapes. The hard structural method with aesthetic treatment can be designed to complement a wide range of urban and industrial landscape settings and, with care, some suburban settings. However, this method has a large potential for introducing negative deviations that will detract from the valued visual characteristics of wild-land, natural, pastoral, rural and most suburban landscape settings. An example of this method is The District's Arizona Channel Diversion Canal conveyance facility located in the Biltmore area of the City of Phoenix is an example of a flood protection facility that incorporates some of the elements of the hard structural method with aesthetic treatment.

Semi Hard Structural Method without Aesthetic Treatment

The semi-hard structural method is similar to the semi-soft structural method, but it lacks the inclusion of aesthetic features and, therefore. The superstructure is constructed predominantly of earthen material. The structure is characteristically large-scale, with an overall geometric and straight form, uniform side slopes, bottom (invert) and over-bank areas. Component structures for grade control, energy dissipation, inlets and outlets are characteristically standard engineering designs without the incorporation of aesthetic treatments. The semi-hard structural method incorporates vegetation planting of over-bank areas only to the extent required for erosion control, dust control, or meeting U.S. Army Corps of Engineers (USACE) 404 permitting requirements. Except for rural and industrial landscapes, this method has limited ability to complement the visual character of the landscape settings of Maricopa County. The East Maricopa Floodway, Tatum Wash Basin, McMicken Dam and White Tanks FRS#3 are representative of the semi-hard structural method.

Hard Structural Method

The hard structural method includes the construction of heavily armored concrete structures and component facilities without the inclusion of aesthetic treatment measures. These facilities are characteristically large-scale facilities with an overall geometric and straight form, uniform side slopes, bottom and over-bank areas. The hard structural method incorporates vegetation planting of over-bank areas only to the extent required for erosion control, dust control, or meeting USACE 404 permitting requirements. Except for industrial landscapes and perhaps some agricultural landscapes, this method has limited ability to complement the visual character of the landscape settings of Maricopa County. The segment of the District's White Tank 4 inlet channel located near Interstate 10 and the segment of the Old Cross Cut Canal Channel located south of McDowell Road are representative of the application of the hard structural flood protection method.

3.2 Compatibility Ratings

Landscape compatibility ratings provide an indication of the range of flood protection methods that are expected to be compatible with the Landscape Character, Variety Class Ratings, and Visual Sensitivity Levels Ratings identified in the Scenery Resource Analysis. Compatibility ratings were established for the six different flood protection methods that are routinely implemented by the District in delivering flood protection services and facilities to the citizens of Maricopa County. The flood protection methods include both non-structural (regulatory) and structural methods. The structural methods typically include construction of large scale conveyance channels, storage basins, flood retarding structures and dams. The six flood protection methods are exhibited in Table H below:

Flood Protection Methods	Impact Potential	Compatibility Classes
Non-Structural	Least	1
Soft Structural		2
Semi-Soft Structural		3
Hard Structural with Aesthetic Treatments		4
Semi-Hard Structural		5
Hard Structural	Greatest	6

Table H
Flood Protection Method Compatibility Ratings

The above flood protection methods are arrayed as a spectrum, wherein each successive method has an increasing potential for adversely impacting the visual environment. Under this arrangement, for example, areas identified as being compatible with the Semi-Soft Structural Method (Compatibility Class 3) also would be compatible with the Soft Structural and Non-Structural methods as well. Likewise, any Landscape Unit identified as being compatible with the Hard Structural method would also be compatible with all of the other five methods. Hence, each compatibility class represents a range of flood protection methods that would be compatible with the Visual Character of a given area.

The flood protection methods and compatibility classes are described in greater detail in a District technical paper titled *Assessing the Relative Ability of Flood Protection Methods to Achieve Compatibility with the Visual Character of Landscape Settings in Maricopa County, A Proposed Framework for Application to Flood Control District Planning Studies*[3].

3.3 Existing Landscape Character Compatibility

Each of the flood protection methods in Section 3.1 were evaluated for their compatibility with the Landscape Character Units and Sub-units in the Upper New River ADMP Study Area. Each method was rated as either compatible or incompatible based upon the visual character reflected by each of the units and sub-units. The compatibility ratings and resulting compatibility classes reflect typical District applications of the flood protection methods. Incompatible ratings may, in

[3] Assessing the Relative Ability of Flood Protection Methods to Achieve Compatibility with the Visual Character of Landscape Settings in Maricopa County, A Proposed Framework for Application to Flood Control District Planning Studies, December, 2004, Dennis B. Holcomb, ASLA, Landscape Architecture Program Director, Flood Control District of Maricopa County.

some instances, be overcome through the application of special or extraordinary treatments and designs.

Using GIS, this matrix was applied to the Existing Landscape Character Assessment for the Upper New River ADMP Study Area, as shown in Figure 11. The compatibility ratings and resulting compatibility classes are shown in Table I below:

Landscape Character Compatibility Classes Matrix						
	Flood Protection Method					
Landscape Character Units	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Tonto Landscape Character Type Units						
Natural and Pastoral Upper Tonto	C	IC	IC	IC	IC	IC
Natural and Pastoral Sonoran Arizona Uplands	C	IC	IC	IC	IC	IC
Rural Sonoran Arizona Uplands	C	C	IC	IC	IC	IC
Suburban Sonoran Arizona Uplands	C	C	C	IC	IC	IC
Industrial Sonoran Arizona Uplands	C*	C*	C*	C	IC	IC
Sonoran Landscape Character Type Units						
Natural and Pastoral Foothills	C	IC	IC	IC	IC	IC
Natural and Pastoral Valley River & Washes	C	IC	IC	IC	IC	IC
Desert Wash	C	IC	IC	IC	IC	IC
Rural Foothills	C	IC	IC	IC	IC	IC
Natural and Pastoral Arroyo	C	IC	IC	IC	IC	IC
Rural Arroyo§	C	IC	IC	IC	IC	IC
Rural Valley River & Washes	C	IC	IC	IC	IC	IC
Suburban Arroyo	C	IC	IC	IC	IC	IC
Suburban Valley River & Washes	C	IC	IC	IC	IC	IC
Industrial Valley River & Washes	C	IC	IC	IC	IC	IC
Mining	C	C	C	IC	IC	IC
Suburban Foothills	C	C	IC	IC	IC	IC
Industrial Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Bajada	C	C	IC	IC	IC	IC
Desert Wash	C	IC	IC	IC	IC	IC
Dense Vegetation	C	IC	IC	IC	IC	IC
Mining	C	C	C	IC	IC	IC
Rural Bajada	C	C	IC	IC	IC	IC
Suburban Bajada	C	C	IC	IC	IC	IC
Master Planned Community (Desert)	C	C	C	IC	IC	IC
Natural and Pastoral Valley Plain	C	C	C	IC	IC	IC
Natural and Pastoral River Terrace	C	C	C	IC	IC	IC
Natural and Pastoral River Channel	C	C~	C~	IC	IC	IC
Rural Valley Plain	C	C	C	IC	IC	IC
Suburban River Terrace	C	C	C	IC	IC	IC
Suburban Valley Plain	C	C	C	IC	IC	IC
Industrial Bajada	C	C	C	IC	IC	IC
Mining	C	C	C	IC	IC	IC
Industrial Valley Plain	C*	C*	C*	C	C	C^

Compatibility Levels
C= Complimentary and Compatible
IC= Not Complimentary or Compatible

Table I
Existing Landscape Character
Compatibility Classes Matrix

The Existing Landscape Character Compatibility mapping reflects the changes in the compatibility ratings on account of landscape character subunit delineation and supersedes the original compatibility rating. As seen in the map (Figure 11), the majority of the Upper New River study area is compatible with non-structural and soft-structural flood protection method and in some cases a semi-soft structural flood control method.

The mountain lands such as the New River Mountains and Bradshaw Mountains towards the north, smaller mountain ranges in the south, and their associated foothills and bajadas with the several arroyos and washes flowing through them, are more restrictive, with a Compatibility Class 1 or 2. Also, some natural desert washes and densely vegetated areas within the focus area lie within Compatibility Class 1. This is due to their inherent higher visual quality, and the difficulty of complementing the visual character of these pristine areas using semi-soft or other structural methods that have the potential to visually impact the landscape. Any flood control structure planned within or near to these areas should adopt a landscape theme that is as natural as possible so that there is no difficulty in blending with the surrounding landscape.

Compatibility Class 3 within the Upper New River study area is very minimal occurring within the Natural and Pastoral, Rural and Suburban valley lands where possible suburban and rural development has resulted in some modifications in an otherwise untouched landscape. Also, minor Industrial Bajada regions near the river corridor where some industrial and/or cultural activities have modified the landscape were also categorized under Class 3 due to the dominant visual character of the surrounding bajada land. These areas will be complemented by the natural forms of Compatibility Class 3 methods, while being able to visually absorb the limited hard structures associated with this method. However, the rolling landform, dense vegetation, and varied slopes of the bajada would be highly contrasted by an architectonic flood control method, such as a Hard Structural Method.

Compatibility Class 4 and 6 areas are extremely insignificant within the Upper New River study area; Class 4 within the industrial areas in the Tonto Landscape Character and Class 6 within the Industrial Valley Plains. During implementation of flood control structures, both these flood protection methods recommends using aesthetic treatments to introduce positive visual variety into the landscape.

3.4 Planned Future Landscape Character Compatibility

Each of the flood protection methods in Section 3.2 were evaluated for their compatibility with the Planned Future Landscape Character Units in the Upper New River ADMP study area. Each method was rated as either compatible or incompatible based upon the visual character reflected by each of the units and sub-units. The compatibility ratings and resulting compatibility classes reflect typical District applications of the flood protection methods. Incompatible ratings may, in some

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
7th Street
74
East Carefree HWY
Maricopa County
City of Phoenix
Beardsley Canal
Central Arizona Project Canal
Lake Pleasant Rd.
New River Dam
Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

Compatibility Class

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3
- Compatibility Class 4
- Compatibility Class 6

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complementary and Compatible
IC= Not Complementary or Compatible

Landscape Character Compatibility Classes Matrix

Landscape Character Units	Flood Protection Method: Non-Structural	Soft-Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Tonto Landscape Character Type Units						
Natural and Pastoral Upper Tonto	C	IC	IC	IC	IC	IC
Natural and Pastoral Sonoran Arizona Uplands	C	IC	IC	IC	IC	IC
Rural Sonoran Arizona Uplands	C	IC	IC	IC	IC	IC
Suburban Sonoran Arizona Uplands	C	C	C	IC	IC	IC
Industrial Sonoran Arizona Uplands	C	C	C+	C+	IC	IC
Sonoran Landscape Character Type Units						
Natural and Pastoral Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Valley River & Washes	C	C	IC	IC	IC	IC
Desert Wash	C	C	IC	IC	IC	IC
Rural Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Arroyo	C	C	IC	IC	IC	IC
Rural Arroyo§	C	C	IC	IC	IC	IC
Rural Valley River & Washes	C	C	IC	IC	IC	IC
Suburban Arroyo	C	C	IC	IC	IC	IC
Suburban Valley River & Washes	C	C	IC	IC	IC	IC
Industrial Valley River & Washes	C	C	IC	IC	IC	IC
Mining	C+	C	C	IC	IC	IC
Suburban Foothills	C	C	IC	IC	IC	IC
Industrial Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Bajada	C	C	IC	IC	IC	IC
Desert Wash	C	C	IC	IC	IC	IC
Dense Vegetation	C	C	IC	IC	IC	IC
Mining	C	C	IC	IC	IC	IC
Rural Bajada	C	C	IC	IC	IC	IC
Suburban Bajada	C	C	IC	IC	IC	IC
Master Planned Community (Desert)	C	C	IC	IC	IC	IC
Natural and Pastoral Valley Plain	C	C	IC	IC	IC	IC
Natural and Pastoral River Terrace	C	C	IC	IC	IC	IC
Natural and Pastoral River Channel	C	C-	IC	IC	IC	IC
Rural Valley Plain	C	C	IC	IC	IC	IC
Suburban River Terrace	C	C	IC	IC	IC	IC
Suburban Valley Plain	C	C	IC	IC	IC	IC
Industrial Bajada	C	C	IC	IC	IC	IC
Mining	C	C	IC	IC	IC	IC
Industrial Valley Plain	C+	C+	C+	C	C	C+

Compatibility Levels
C= Complementary and Compatible
IC= Not Complementary or Compatible

NOTES:

§ These are Landscape Character Units that are known to exist in Maricopa County. These Units have not been delineated as part of the Landscape Character Assessment, but will be delineated as part of the Area Drainage Master Studies.

* Also achieves compatibility through the introduction of positive visual variety that enhances the character of the landscape setting.

~ Not compatible with Flood Retarding Structures.

^ Hard structures are incompatible when adjacent to or visible from an adjacent landscape character unit that is incompatible with a Hard structure or when located within an industrial park.

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 11
Existing Landscape Character Sub-units Compatibility

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instances, be overcome through the application of special or extraordinary treatments and designs.

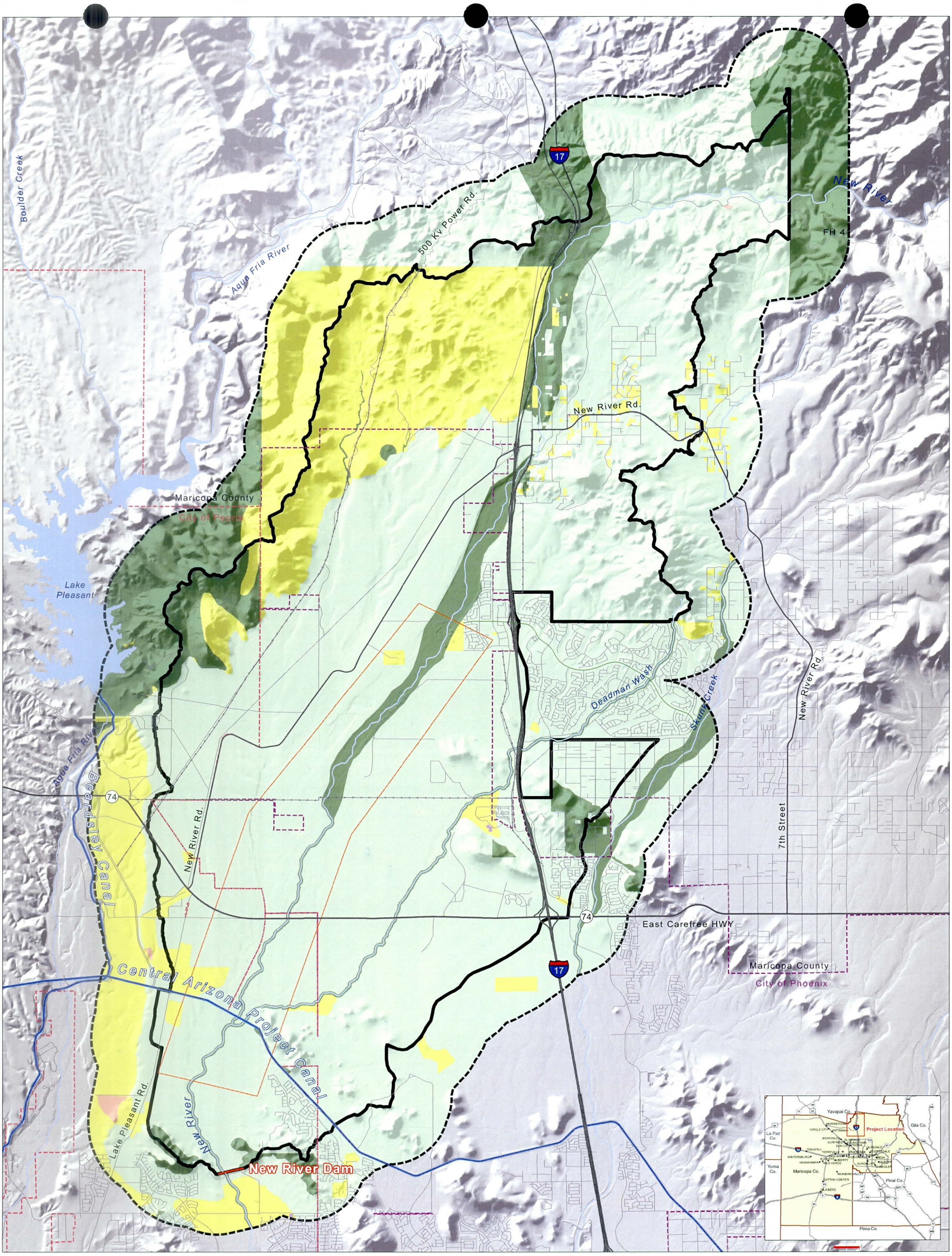
Using GIS, this matrix was applied to the Planned Future Landscape Character Assessment for the Upper New River ADMP study area, as shown in Figure 12. The compatibility ratings and resulting compatibility classes are shown in Table J below:

Landscape Character Compatibility Classes Matrix						
	Flood Protection Method					
Landscape Character Units	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Tonto Landscape Character Type Units						
Natural and Pastoral Upper Tonto	C	IC	IC	IC	IC	IC
Rural Upper Tonto	C	IC	IC	IC	IC	IC
Natural and Pastoral Sonoran Arizona Uplands	C	IC	IC	IC	IC	IC
Rural Sonoran Arizona Uplands	C	C	IC	IC	IC	IC
Suburban Sonoran Arizona Uplands	C	C	C	IC	IC	IC
Industrial Sonoran Arizona Uplands	C*	C*	C*	C	IC	IC
Sonoran Landscape Character Type Units						
Natural and Pastoral Foothills	C	IC	IC	IC	IC	IC
Natural and Pastoral Arroyo§	C	IC	IC	IC	IC	IC
Natural and Pastoral Valley River & Washes§	C	IC	IC	IC	IC	IC
Rural Foothills	C	IC	IC	IC	IC	IC
Rural Arroyo§	C	IC	IC	IC	IC	IC
Rural Valley River & Washes§	C	IC	IC	IC	IC	IC
Suburban Arroyo§	C	IC	IC	IC	IC	IC
Suburban Valley River & Washes§	C	IC	IC	IC	IC	IC
Industrial Valley River & Washes§	C	IC	IC	IC	IC	IC
Suburban Foothills	C	C	IC	IC	IC	IC
Urban Foothills	C	C	IC	IC	IC	IC
Industrial Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Bajada	C	C	IC	IC	IC	IC
Rural Bajada	C	C	IC	IC	IC	IC
Suburban Bajada	C	C	IC	IC	IC	IC
Natural and Pastoral Valley Plain	C	C	C	IC	IC	IC
Natural and Pastoral River Terrace	C	C	C	IC	IC	IC
Natural and Pastoral River Channel	C	C~	C~	IC	IC	IC
Rural Valley Plain	C	C	C	IC	IC	IC
Suburban River Terrace	C	C	C	IC	IC	IC
Suburban River Channel	C	C~	C~	IC	IC	IC
Suburban Valley Plain	C	C	C	IC	IC	IC
Urban Bajada	C	C	C	IC	IC	IC
Industrial Bajada	C	C	C	IC	IC	IC
Urban River Terrace	C*	C*	C*	C	IC	IC
Industrial Valley Plain	C*	C*	C*	C	C	C^

Compatibility Levels
C= Complimentary and Compatible
IC= Not Complimentary or Compatible

Table J
Planned Future Landscape Character
Compatibility Classes Matrix

In contrast with the existing landscape and as seen on the map (Figure 12), a majority of the area though pristine and scenic, is compatible with soft-structural flood protection method. There is a decrease in exclusive compatibility with Non-structural



LEGEND

FUTURE SCENIC RESOURCE COMPATIBILITY RATINGS

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3
- Compatibility Class 4
- Compatibility Class 6

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C+ Complimentary and Compatible
IC= Not Complimentary or Compatible

Landscape Character Compatibility Classes Matrix

Landscape Character Units	Flood Protection Method: Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Tonto Landscape Character Type Units						
Natural and Pastoral Upper Tonto	C	IC	IC	IC	IC	IC
Rural Upper Tonto	C	C	IC	IC	IC	IC
Natural and Pastoral Sonoran Arizona Uplands	C	C	IC	IC	IC	IC
Rural Sonoran Arizona Uplands	C	C	IC	IC	IC	IC
Suburban Sonoran Arizona Uplands	C	C	C	IC	IC	IC
Industrial Sonoran Arizona Uplands	C+	C+	C+	C	IC	IC
Sonoran Desert Landscape Character Type Units						
Natural and Pastoral Foothills	C	IC	IC	IC	IC	IC
Natural and Pastoral Arroyos	C	IC	IC	IC	IC	IC
Natural and Pastoral Valley (River & Washes)	C	IC	IC	IC	IC	IC
Rural Foothills	C	IC	IC	IC	IC	IC
Rural Arroyos	C	IC	IC	IC	IC	IC
Rural Valley (River & Washes)	C	IC	IC	IC	IC	IC
Suburban Arroyos	C	IC	IC	IC	IC	IC
Suburban Valley (River & Washes)	C	IC	IC	IC	IC	IC
Industrial Valley (River & Washes)	C	IC	IC	IC	IC	IC
Suburban Foothills	C	C	IC	IC	IC	IC
Urban Foothills	C	C	IC	IC	IC	IC
Industrial Foothills	C	C	IC	IC	IC	IC
Natural and Pastoral Bajada	C	IC	IC	IC	IC	IC
Rural Bajada	C	C	IC	IC	IC	IC
Suburban Bajada	C	C	C	IC	IC	IC
Natural and Pastoral Valley Plain	C	IC	IC	IC	IC	IC
Natural and Pastoral River Terrace	C	IC	IC	IC	IC	IC
Natural and Pastoral River Channel	C	C+	C+	IC	IC	IC
Rural Valley Plain	C	C	C	IC	IC	IC
Suburban River Terrace	C	C	C	IC	IC	IC
Suburban River Channel	C	C+	C+	IC	IC	IC
Suburban Valley Plain	C	C	C	IC	IC	IC
Urban Bajada	C	C	C	IC	IC	IC
Industrial Bajada	C	C	C	IC	IC	IC
Urban River Terrace	C+	C+	C+	C	IC	IC
Industrial Valley Plain	C+	C+	C+	C	C	C+

Compatibility Levels
C+ Complimentary and Compatible
IC= Not Complimentary or Compatible

NOTES:

§ These are Landscape Character Units that are known to exist in Maricopa County. These Units have not been delineated as part of the Landscape Character Assessment, but will be delineated as part of the Area Drainage Master Studies.

* Also achieves compatibility through the introduction of positive visual variety that enhances the character of the landscape setting.

~ Not compatible with Flood Retarding Structures.

^ Hard structures are incompatible when adjacent to or visible from an adjacent landscape character unit that is incompatable with a Hard structure or when located within an industrial park.

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Figure 12
Planned Future Landscape Character Unit Compatibility

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flood protection methods and increase in compatibility with Semi-soft structural methods when compared to Existing Landscape Character Compatibility.

The mountain lands such as the New River Mountains on the north and some smaller areas in the south and all the rivers and washes, are more restrictive and lie within Compatibility Class 1. Most of the other intact bajadas and foothills associated with the numerous mountain ranges were categorized as Compatibility Class 2, i.e. Soft-Structural. This is due to their inherent higher visual quality, and the difficulty of complementing the visual character of these areas using semi-soft or other structural methods that have the potential to visually impact the landscape. Any flood control structure planned within or near to these areas should adopt a landscape theme that is as natural as possible so that there is no difficulty in blending with the surrounding landscape.

The proportion of Compatibility Class 3, i.e. semi-soft structural is higher when compared to Existing Landscape Character. In addition to the natural and pastoral and suburban valley and river lands, urban and industrial bajada also falls within this category. The purpose is that future developments and cultural modifications in these areas will be complemented by the natural forms of Compatibility Class 3 methods, while being able to visually absorb the limited hard structures associated with this method. However, the rolling landform, dense vegetation, and varied slopes of the bajada would be highly contrasted by an architectonic flood control method, such as a Hard Structural Method.

Compatibility Class 4 and 6 areas are extremely insignificant within the Upper New River study area. Class 4 compatibility is restricted to the industrial areas in the Tonto Landscape Character Type, where the disturbance of the Industrial landscape continues to retain the overall visual character of the surrounding landscape. This necessitates using aesthetic treatments and visually sensitive considerations in the implementation of flood control structures in these areas.

The Industrial Valley Plains is the only area compatible with any form of flood control method, or Compatibility Class 6. This is based on the landscape being highly modified from its natural condition. More natural methods also are visually compatible with the industrial landscape in that they introduce positive visual variety into the landscape.

3.5 Landscape Variety Class Compatibility

Each of the flood protection methods in Section 3.2 were evaluated for their compatibility with the variety classes and each method was rated as either compatible or incompatible based upon the scenic importance reflected by each of the variety classes. The compatibility ratings and resulting compatibility classes are shown in Table K below. The ratings reflect typical Flood Control District applications of the

flood protection methods. Incompatible ratings may, in some instances, be overcome through the application of special or extraordinary treatments and designs.

LANDSCAPE VARIETY CLASS COMPATIBILITY RATING FOR FLOOD PROTECTION METHODS				
	Landscape Variety Classes			
Flood Protection Methods	A+	A	B	C
Non-Structural	C	C	C	C
Soft Structural	IC	C	C	C
Semi-Soft Structural	IC	C	C	C
Hard Structural with Aesthetic Treatment	IC	IC	C	C
Semi-Hard Structural	IC	IC	C	C
Hard Structural	IC	IC	C	C
Compatibility Class	1	3	6	6

Table K
Landscape Variety Class Compatibility Class Ratings

In the above table, Compatibility Class 1 denotes Variety Classes that are compatible only with the Non-Structural Method; Compatibility Class 3 denotes Variety Classes that are compatible with the Non-Structural, Soft Structural and Semi-Soft Structural Methods; and Compatibility Class 6 denotes Variety Classes that are compatible with all of the Flood Protection Methods.

The information in Table K was utilized in GIS to produce a map showing the Variety Class Landscape Compatibility. Additionally, as part of Final SRA for Upper New River ADMP, EDAW updated the Variety Class Compatibility Mapping to include Landscape Character Subunits and is illustrated in Figure 13.

Overall, the entire study area consists of only three Compatibility Classes; Class 1, Class 3 and Class 6. In Figure 7, there were few areas identified as having a Variety Class rating of "A+". These areas are primarily along major washes where the vegetation is dense or exhibit natural desert wash characteristics. These areas exhibit higher scenic quality than the surrounding landscapes and hence to cause almost no visual disruption within these areas, the flood protection method implemented should be Class 1, i.e. Non-structural. Otherwise, since the majority of the Upper New River Study Area has a Variety Class Rating of "A", potential Flood Control Methods within these areas should result in minimal visual impacts to the landscape. For this reason, these areas are restricted to Compatibility Class 3 methods. The Variety Class "C" landscapes of the Valley Plains are of lower scenic quality and are either visually compatible with less restrictive flood control methods, or are able to absorb the structures associated with these methods. Therefore, these areas were given a Compatibility Class 6 rating.

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Agua Fria River
Beardsley Canal
74
New River Rd.
Deadman Wash
Skunk Creek
New River Rd.
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

Compatibility Class

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3
- Compatibility Class 4
- Compatibility Class 6

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C: Complementary and Compatible
IC: Not Complimentary or Compatible

LANDSCAPE VARIETY CLASS COMPATIBILITY RATING FOR FLOOD PROTECTION METHODS

	Landscape Variety Class			
Flood Protection Methods	A+	A	B	C
Non-Structural	C	C	C	C
Soft Structural	IC	C	C	C
Semi-Soft Structural	IC	C	C	C
Hard Structural with Aesthetic Treatment	IC	IC	C	C
Semi-Hard Structural	IC	IC	C	C
Hard Structural	IC	IC	C	C
Compatibility Class	1	3	6	6

Compatibility Levels
C: Complementary and Compatible
IC: Not Complementary and Compatible

Compatibility Class 1 denotes Variety Classes that are compatible only with the Non-Structural Method;

Compatibility Class 3 denotes Variety Classes that are compatible with the Non-Structural, Soft Structural and Semi-Soft Structural Methods; and

Compatibility Class 6 denotes Variety Classes that are compatible with all of the Flood Protection Methods.

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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DATE: September 2007

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Figure 13
Landscape Variety Classes Compatibility

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3.6 Visual Sensitivity Levels Compatibility

The flood protection methods were evaluated for each of the Visual Sensitivity Levels and each method was rated as either compatible (C) or incompatible (IC) based upon the viewer concern levels and viewing distance zones in each Sensitivity Level. The compatibility ratings and resulting compatibility classes are shown in Table L below. The ratings reflect typical Flood Control District applications of the flood protection methods. Incompatible ratings may, in some instances, be overcome through the application of special or extraordinary treatments and designs.

VISUAL SENSITIVITY LEVELS LANDSCAPE COMPATIBILITY RATINGS MATRIX							
Flood Protection Methods	**Visual Sensitivity Levels**						
	Fg1	**Mg1**	**Bg1**	**Fg2**	**Mg2**	**Bg2**	**Bg3**
Non-Structural	C	C	C	C	C	C	C
Soft Structural	C	C	C	C	C	C	C
Semi-Soft Structural	C	C	C	C	C	C	C
Hard Structural with Aesthetic Treatment	IC	C	C	C	C	C	C
Semi-Hard Structural	IC	IC	C	IC	IC	C	C
Hard Structural	IC	IC	C	IC	IC	C	C
Compatibility Class	3	4	6	6	6	6	6

Table L
Visual Sensitivity Levels' Compatibility Class Ratings

As noted earlier in the section on Visual Sensitivity Levels Mapping, only Level 1 Sensitive Travelways were mapped for this study. By applying the above matrix to this mapping using GIS, the Visual Sensitivity Levels Compatibility Class Mapping was completed for the Upper New River study area (Figure 14) and the compatibility class rating is displayed in the Table M below:

Visual Sensitivity Compatibility Classes Matrix						
Visual Sensitivity Levels	**Flood Protection Method**					
	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Foreground Level1	C	C	C	IC	IC	IC
Middleground Level1	C	C	C	C	IC	IC

Table M
Visual Sensitivity Levels' Compatibility Class Ratings for UNR

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Agua Fria River
Beardsley Canal
74
New River Rd.
Deadman Wash
Skunk Creek
New River Rd
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Loop 303 (Future)
Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Gila Co.
Project Location
La Paz Co.
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

VISUAL SENSITIVITY FEATURES

- Interstate
- Freeways
- State Highway
- Divided Highway
- Arterial (paved)
- Arterial (unpaved)
- Collector (unpaved)
- Collector (paved)
- Scenic Route
- Regional Trails

Compatibility Class

- 3
- 4

Visual Sensitivity Compatibility Classes Matrix

Visual Sensitivity Levels	Flood Protection Method					
	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Foreground Level1	C	C	C	IC	IC	IC
Middleground Level1	C	C	C	C	IC	IC

Note 1: These compatibility ratings reflect typical Flood Control District applications of the following Flood Protection Methods. Incompatible ratings may, in some instances, be overcome through the application of special or extraordinary treatments and designs.

Note 2: Compatibility Class 3 denotes Visual Sensitivity Levels that are compatible with the Non-Structural, Soft Structural and Semi-Soft Structural Flood Protection Methods. Class 4 denotes Levels that are compatible with the Non-Structural, Soft Structural, Semi-Soft and Hard Structural with Aesthetic Treatment Methods, and Class 6 denotes Visual Sensitivity Levels that are compatible with all of the Flood Protection Methods.

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Figure 14
Existing Visual Sensitivity Compatibility Classes for Travelways

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Proposed Flood Control Methods located within the Foreground of a Sensitivity Level 1 Travelway, or ¼ mile, require greater sensitivity to the compatibility of the facility with the LCU's visual character. For this reason, Compatibility Class 3 methods have been deemed best suited for these areas because of the minimal impact they incur on the landscape.

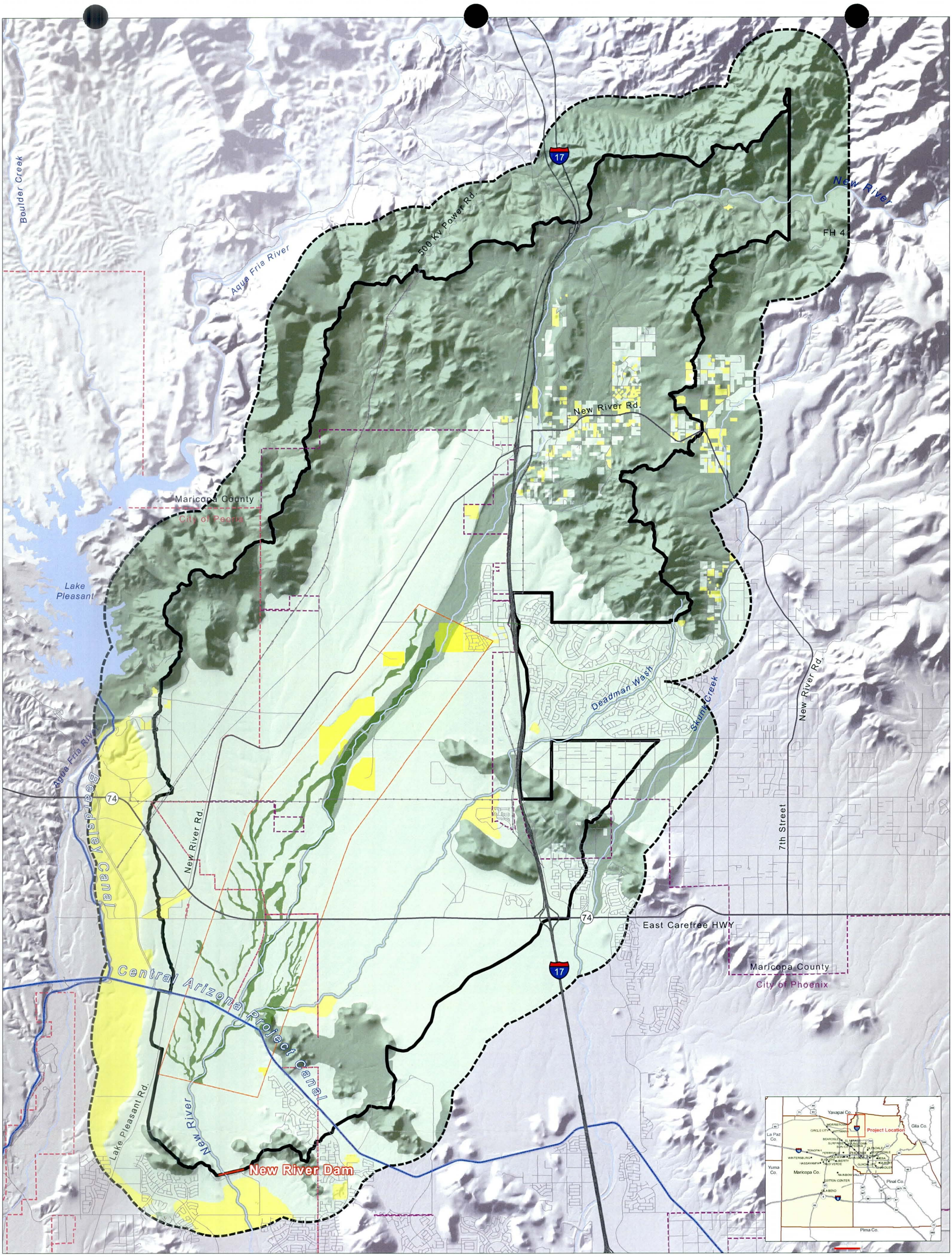
The greater viewing distance of the Middleground allows the landscape to better visually absorb the hard structures associated with some Flood Control Methods. However, areas in the Middleground of a Sensitivity Level 1 Travelway, or between ¼ mile and 3 miles, also require sensitivity to the compatibility of the facility with the LCU's visual character. For this reason, any hard structure facility proposed would require the careful consideration of aesthetics and complementing the Visual Character of the landscape, resulting in a Compatibility Class 4 rating.

3.7 Existing Scenery Resource Compatibility

Using GIS to overlay the Existing Landscape Character Compatibility Map, the Variety Class Compatibility Map, and the Travelways Sensitivity Compatibility Map, produced an overall Existing Scenery Resource Compatibility Map (Figure 15). Where this overlay resulted in areas of lesser restriction matching areas of higher restriction, the most restrictive Compatibility Class took precedence. In this way, the Compatibility Class shown is the best suited to all aspects of the Visual Character for that particular area of the study area. Overall, majority of the study area lies within Compatibility Class 1 & 2 with smaller areas of Compatibility Class 3 scattered within the study area as well as in the 1 mile buffer (area outside the Project area).

The areas of Compatibility Class 1 and 2 from the Existing Landscape Character Compatibility Map associated with the Mountain Lands Subtype, Dense vegetation and Desert wash areas within the Bajada and Valley Rivers and Washes require that any proposed Flood Control Methods in these areas not modify the Visual Character of the landscape. This is due to their inherent higher visual quality and the difficulty of complimenting the visual character of these areas using Semi-Soft or other methods that have the potential to visually impact the landscape.

The Compatibility Class 3 ratings within the Valley Plain and Industrial Bajada regions along the New River show that the Visual Character of the study area is most compatible with natural forms and minimal hard structures that are subordinate to the overall Visual Character of the landscape. In general, the Class 3 areas are either situated in pristine and scenic mountainous regions or are crossed by the Valley Rivers and Washes, where the higher visual quality, and the difficulty of complementing the visual character of these areas using Soft Structural or other methods that have the potential to visually impact the landscape. This implies that flood protection structures planned within these areas should be most compatible with natural forms and landscape aesthetic treatments with no visible hard structures. While planning any flood control structure within or near to these areas, care should



LEGEND

EXISTING SCENIC RESOURCE COMPATIBILITY RATINGS

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complimentary and Compatible
IC= Not Complimentary or Compatible

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Figure 15
Existing Scenic Resource Compatibility (Updated with Sub-Units)

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be taken to adopt a landscape theme that is as natural as possible so that there is no difficulty in blending with the surrounding landscape.

3.8 Planned Future Scenery Resource Compatibility

Using GIS to overlay the Planned Future Landscape Character Compatibility Map, the Variety Class Compatibility Map, and the Travelways Sensitivity Compatibility Map, produced an overall Existing Scenery Resource Compatibility Map (Figure 16). While this overlay resulted in areas of lesser restriction matching areas of higher restriction, the most restrictive Compatibility Class took precedence. In this way, the Compatibility Class shown is the best suited to all aspects of the Visual Character for that particular area of the study area. Overall, majority of the land within the study area lies within Compatibility Class 2, some areas with Compatibility Class 3 and scattered areas with Compatibility Class 1 within the study area as well as in the 1 mile buffer.

The areas of Compatibility Class 1 and 2 from the Planned Future Landscape Character Compatibility Map associated with the undeveloped landscapes require that any proposed Flood Control Methods in these areas not modify the Visual Character of the landscape. This is due to their inherent higher visual quality, and the difficulty of complementing the visual character of these areas using Semi-Soft or other methods that have the potential to visually impact the landscape.

The Compatibility Class 3 ratings within the Valley Plains and Industrial Bajada scattered throughout the region, and Suburban Bajada in the northwest region imply that the Visual Character of the study area is most compatible with natural forms and minimal hard structures that are subordinate to the overall Visual Character of the landscape. As seen on the map, the Class 3 areas are surrounded by mountains and Valley Rivers and Washes where the higher visual quality and the difficulty of complementing the visual character of these areas using Soft Structural or other methods that have the potential to visually impact the landscape results in bands and patches of Compatibility Class 1 running throughout the landscape. It indicates that flood protection structures planned within these areas should be most compatible with natural forms and landscape aesthetic treatments with no visible hard structures. Also, care should be taken to adopt a landscape theme that is as natural as possible so that there is no difficulty in blending with the surrounding landscape.

3.9 Existing Scenic Resource Opportunities and Constraints

Using GIS to overlay the Scenic Integrity map (Figure 8) over Existing Scenery Resource Compatibility Map (Figure 15), produced an overall Existing Scenery Resource Compatibility Opportunities and Constraints Map (Figure 17). The map highlights areas of high and low scenic integrity while exhibiting the underlying flood protection method that will be appropriate in those areas. additionally, the map also

Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
New River Rd
7th Street
74
East Carefree HWY
Maricopa County
City of Phoenix
Beardsley Canal
Central Arizona Project Canal
Loop 303 (Future)
Lake Pleasant Rd.
New River
New River Dam

Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

EXISTING SCENIC RESOURCE COMPATIBILITY RATINGS

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complimentary and Compatible
NC= Not Complimentary or Compatible

0 0.25 0.5 1 Miles

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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Figure 16
Future Scenic Resource Compatibility

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Boulder Creek
Agua Fria River
500 Kv Power Rd.
17
New River
FH 4
Historic Black Canyon Rd.
New River Rd.
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
New River Rd.
74
Beardsley Canal
Black Canyon Hiking and Equestrian Trail
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Central Arizona Project Canal
Loop 303 (Future)
Lake Pleasant Rd.
New River
New River Dam
Yavapai Co.
Gila Co.
La Paz Co.
Project Location
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

EXISTING SCENIC RESOURCE COMPATIBILITY RATINGS

- Compatibility Class 1
- Compatibility Class 2
- Compatibility Class 3

SCENIC INTEGRITY

- High Scenic Integrity
- Low Scenic Integrity
- Scenic Routes
- Power Corridor - 300ft Buffer

OTHER FEATURES

- Eco-Cultural Sites
- Historic Black Canyon Road
- Scenic Route
- Regional Trails

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complimentary and Compatible
NC= Not Complimentary or Compatible

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
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Figure 17
Existing Scenic Resource Opportunities & Constraints

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shows the major regional trails and some scenic routes that could be enhanced as part of this project. This map does not change the level of information, but helps in better understanding of the study area and aids in planning flood control solutions in a more informed manner. For example, immediately north of CAP where the canal intersects with the future Loop 303, it is seen that Compatibility Class 2 is the appropriate compatibility class. However, by overlaying scenic integrity layer, it also shows that the area is low in scenic integrity. This means that any structural solutions planned within this area will likely be more suitable in that area since the landscape will be more conducive to change and alteration. Not only that, it also presents an opportunity for landscape improvement and planning some recreation/multi-use facility for residents in the surrounding communities.

4.0 RECREATION RESOURCE ASSESSMENT (RRA)

The Recreation Resource Assessment (RRA) is a regional and local assessment of recreation resources within the Upper New River ADMP study area. The assessment includes an inventory of existing and proposed parks, recreation areas and open spaces within the study area. It also includes an analysis of the relative compatibility of these recreation resources with a variety of flood protection methods that are routinely applied by the District in delivering flood protection services and facilities to the citizens of Maricopa County.

4.1 Goals and Objectives

The District's recreation goal is to promote recreation multiple-uses of its properties and partnerships with the Parks and Recreation Department of Maricopa County and local communities. The intent is to plan and design flood control facilities that increase their year round value and assist in meeting public needs for parks and recreation, trails and open spaces. The achievement of this goal is also recognized by the District as essential for gaining public and stakeholder support. However, such implementation should be carried out to the extent that they do not compromise the flood control function, operation and maintenance of flood control facilities. Project objectives related to the achievement of the District recreation goals include planning and designing flood control solutions that:

- Maximize opportunities to meet regional and local community needs for passive and active recreation uses, trails and open space
- Preserve and complement the desired character and recreation experience of existing parks and recreation areas within Maricopa County while maximizing context sensitivity, aesthetic value and recreational benefits of flood control solutions
- Maximize opportunities for the implementation of the Maricopa Association of Governments' Desert Spaces Plan and Maricopa Regional Trail Master Plan
- Achieve consistency with the goals and objectives of local community general plan open space elements

4.2 Process and Methodology

In order to assist in meeting public needs for parks and recreation in Maricopa County, identification of existing and planned recreational opportunities at the onset of the project is very vital. Recreation Resource Assessment was thus undertaken to assist the District in the identification, analysis, integration and capture of recreation and multi-use opportunities within the Upper New River ADMP study area. The assessment carried out by the District at a regional level

served as a frame of reference for more detail studies of recreation resources at a local level that was carried out as a part of Upper New River ADMP Final RRA. The process and methodology adopted to carry out the RRA includes the following:

- Identify and provide an overview of regionally significant recreation resources within the regional setting of the project area;
- Provide an inventory of existing and future planned recreation resources within the study area;
- Analyze compatibility for the recreation resources with non-structural and structural flood protection methods; and
- Identify opportunities for flood control solutions that will help meet public needs for recreation and open space.

4.3 Recreation Resource Inventory

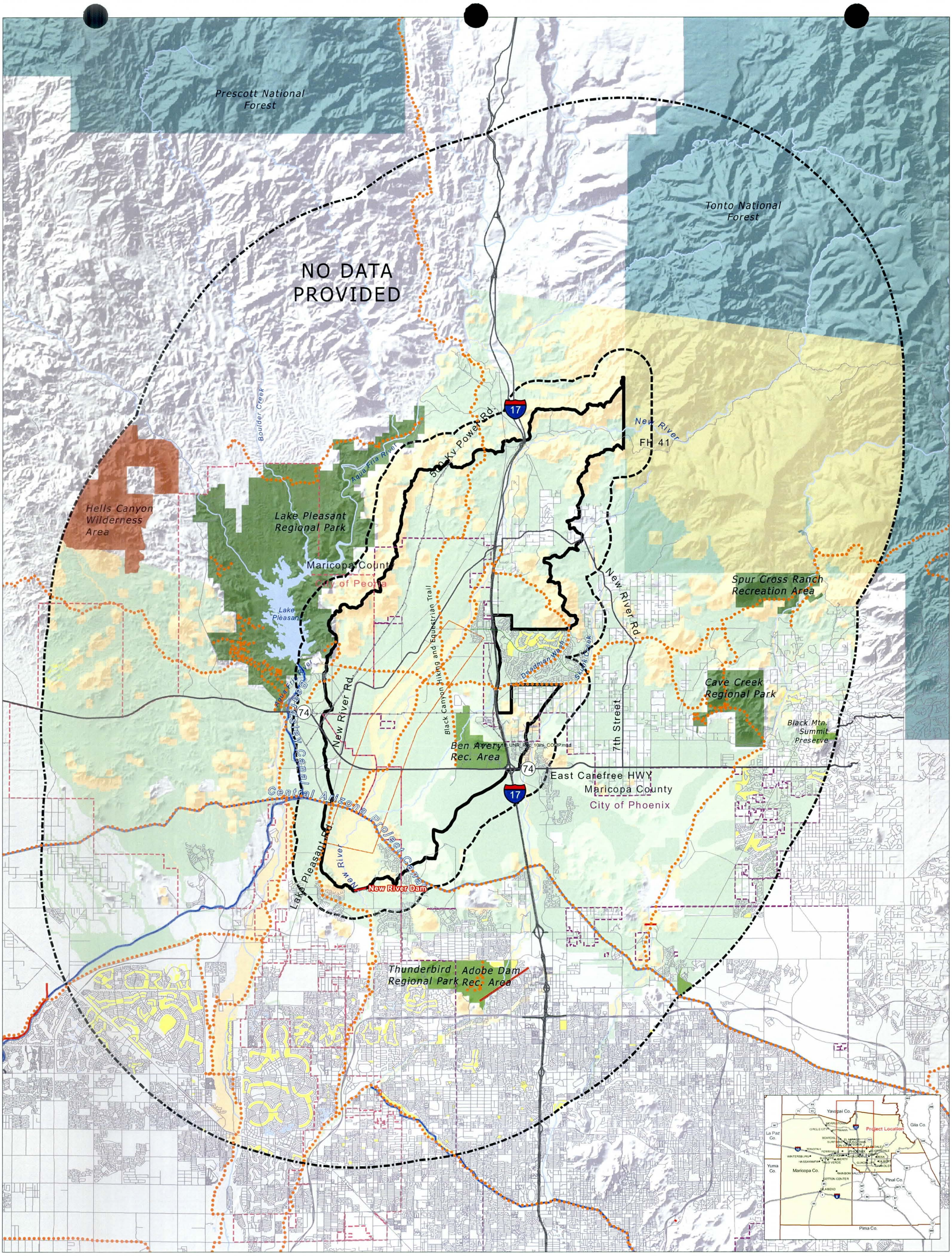
This section documents the inventory of recreation features existing within the Upper New River ADMP study area for both, regional as well as local boundaries.

4.3.1 Regional RRA Inventory

The regional RRA for the Upper New River ADMP is currently limited to an inventory and analysis of recreation opportunities 10 miles outside the ADMP project boundary. The assessment includes an inventory of existing regional parks, recreation areas and open spaces within the study area limits, which is 10 miles outside the project boundary in this case. The Existing Recreation Resources within the regional setting of the Upper New River ADMP study area is illustrated in Figure 18.

The major recreation areas within the 10 mile boundary include; to the west Hells Canyon Wilderness Area and Lake Pleasant Regional Park, to the south Ben Avery Recreation Area and Thunderbird Adobe Dam Regional Park Recreation Area, to the east Spur Cross Ranch Recreation Area, Black Mountain Summit Preserve and Cave Creek Regional Park and to the north Tonto National Forest. Other important features within the study area along which recreation opportunities can be explored include; the Central Arizona Project Canal (CAP), Beardsley Canal, SR 74, Deadman Wash, Agua Fria River, and New River.

Additionally, portions of the Maricopa Regional Trail System connecting the regional parks, Black Canyon Hiking and Equestrian Trail and the several Conservation and Retention Areas identified as County Open Spaces by MAG on their MAG Desert Spaces map are also included in the regional recreation.



LEGEND

- Regional Boundary (10 mi.)
- Regional Trails

Regional Recreation (10 mile Area)

- Federal Wilderness Area
- County Regional Parks
- County Regional Recreation Areas
- City Regional Parks
- National Forest
- City Mountain Preserves
- County Open Spaces & Retention Areas
- County Open Spaces & Conservation Areas
- County Parks
- Local Parks & Golf Courses

Miles 0 0.5 1 2 3

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 18
Regional Recreation Resources (10 mi.)

P:\2006\06220034.01\GIS\Mxd_Files\070808_updated_Final RRA_SRA\070813_Fig 17_UNR_Reg_Rec_Res_10mi.mxd

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8211 S. 48th Street
Phoenix, AZ U.S.A. 85044

Below, is a brief overview of some of the features mentioned above:

Maricopa Regional Trail System Plan, MAG (2003)

As mentioned earlier, portions of the Maricopa Regional Trail System falls within the study area. the Maricopa County Regional Trails System is a significant recreational feature is a comprehensive system of non-motorized trail corridors that link the regional parks (Figure 18). It also provides open space corridors that protect natural and cultural resources from development. The trail capitalizes on existing rights-of-way such as canals, parks, utility corridors and flood control projects. Shown within the study area, by way of the New River Channel, the proposed regional trail system has a strong linear connection north/south with tangent trails to the east and west connecting to Lake Pleasant Regional Park, Ben Avery Recreation Area, Cave Creek Regional Park and Spur Cross Ranch Recreation Area.

Additionally, trail corridors along New River can enhance the open space usage and linkages within the study area. For example, as seen on the map, future planned regional trail located along the east bank of New River with a future roadway bridge crossing at the river channel to accommodate vehicular traffic for Anthem Way Development can increase recreation use of the area. The bridge crossing will also be able to accommodate trail access along New River with an underpass for bicycles and pedestrians. This will create safe pedestrian crossing without vehicular traffic interference.

MAG Desert Spaces Plan (1995)

MAG Desert Spaces Plan was developed to provide guidance for regional open space planning in the metropolitan Phoenix Area. The concept of the Desert Spaces plan is to preserve, protect and enhance regionally significant scenic, biological, archaeological, and recreational lands. Environmentally sensitive areas of upland Sonoran desert and floodplains of major rivers and washes that thread through the region are included in the Plan. The plan establishes policies for the conservation of the most important open space and the retention of and access to critical open space resources that are located in areas that are likely to be developed. Within the study area, most of the mountain areas and along the New River area fall within the conservation area which denotes public and private lands that have outstanding open space value. These areas are recommended for protection from development, and management that will protect, maintain and enhance their intrinsic value for recreational, aesthetic and biological purposes.

State Route 74 Scenic Corridor Guidelines

The State Route 74 area is located along the southern portion of the New River Study Area and runs east and west. This route is a unique place which provides many recreational opportunities and is considered a place of regional significance. The guidelines encourage; preservation of plant communities and wildlife,

preserving washes which provide important habitat and vegetation habitat, maintain low building heights that do not impact viewsheds, and maintain a connection to Lake Pleasant Regional Park.

The Black Canyon Hiking and Equestrian Trial

The Black Canyon Hiking and Equestrian Trial established by the BLM and Maricopa and Yavapai county governments, is a historic sheep trial officially recognized in 1919. The trail parallels Interstate 17 and extends northward from State Route 74 in northern Phoenix and Peoria to about 10 miles north of Cordes Junction in Prescott National Forest. It served sheepmen as a restricted route for driving their herds northward to rich grasslands and cooler temperatures in the summer and then returning them southward in the winter for warmer weather and better grazing land. Today the trail occurs west of the actual sheepherding corridor. However, it is maintained by the Black Canyon Trail Coalition.

4.3.2 Local RRA Inventory

The regional recreation inventory served as a framework and starting point for more detail studies of local recreation resources as a part of Upper New River ADMP Final Recreation Resource Assessment. The local RRA for Upper New River ADMP is currently limited to an inventory 1 mile outside the project area boundary, i.e. the study area. The assessment includes an inventory of existing and proposed community and urban parks, recreation areas, open spaces including conservation and retention areas within the general plan of cities, local trails, golf courses, and scenic routes. The idea is to incorporate planned and existing recreational features within the City of Phoenix and City of Peoria, which lie within the Upper New River ADMP study area.

The Existing and Planned Recreation Resources within the local setting of the Upper New River ADMP are illustrated in Figure 20. A brief overview of the recreation resources within each municipality is outlined below:

City of Peoria – General Plan

The City's General Plan provides a framework for making decisions by describing long-term goals for the City's future as well as policies to guide day to day decisions. Peoria is fortunate to have an abundance of river corridors and natural landforms. This provides the City with leveraging resources with a comprehensive system of trails, bike routes and recreational corridors with a regional context and connectivity to adjoining cities. In 2002, the City of Peoria adopted the Parks, Recreation, and Open Spaces Master Plan (PROSMP) that will serve as the specific planning document to be referenced regarding detailed planning standards, existing and future park services area radii and open space

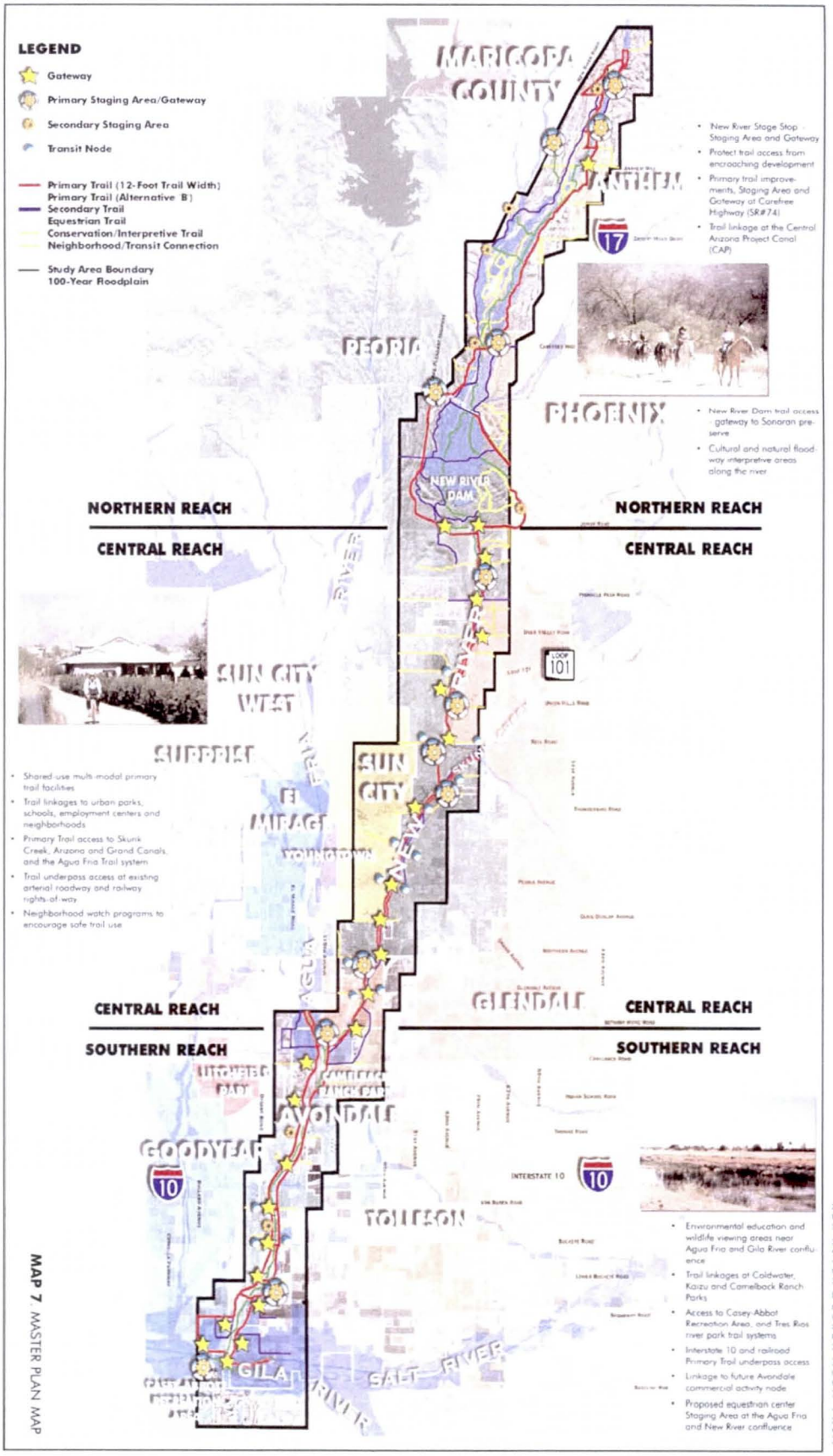
provisions. The City shall also provide additional dedicated open space, linear parks, special use parks/conservancy parks and trails along the New River, Agua Fria, mountain areas and Lake Pleasant Basin located in the southern edge of the ADMP study area. Additionally, the CAP located within Peoria is a great link to Lake Pleasant Regional Park by way of the Agua Fria or the Beardsley Canal. Also, southbound is the connection to the mountain preserves that include Thunderbird Park and Deems Hills with multiple internal trails.

Future recreation within the City of Peoria also includes a chain of parks heading north toward the conservation area. Additionally, within the conservation area there are a number of meandering trails weaving into Lake Pleasant Regional Park from the east.

City of Phoenix – New Valley Multi-Model Transportation Corridor Master Plan

The New Valley Multi-Model Transportation Corridor Master Plan is part of a multi-phase undertaking conducted through the efforts of the Maricopa Association of Governments (MAG), in cooperation with the District. This study provides a precedent for an overall plan to be designed involving several communities who will then be responsible for building their section of the Corridor. The purpose of this plan is to create a regional planning framework for a 42 mile trail network along the Lower Agua Fria River and New River for pedestrians, equestrians, bicyclists, and other non-motorized trail users. A large portion of this Master Plan is located in the Upper New River ADMP study area within the City of Phoenix along the New River Corridor.

Design considerations within this area include but are not limited to, a primary trail along New River with primary gateways located at the Black Canyon Hiking and Equestrian Trail, future New River/Anthem Bridge to accommodate primary trail access and underpass improvements, and a gateway for the historic New River Stage Stop. The Old New River stage stop was for many years a primary stage line stop for the Black Canyon Stage line, providing transportation services from Phoenix to Prescott. This route should be addressed in interpretive signages as an important historical transportation feature in the New River trail system. Also, secondary and neighborhood trails shown on the west side of the New River outside the channel form connections for future neighborhood and commercial areas improving accessibility at Anthem Way and the proposed New River primary regional trail on the east bank.

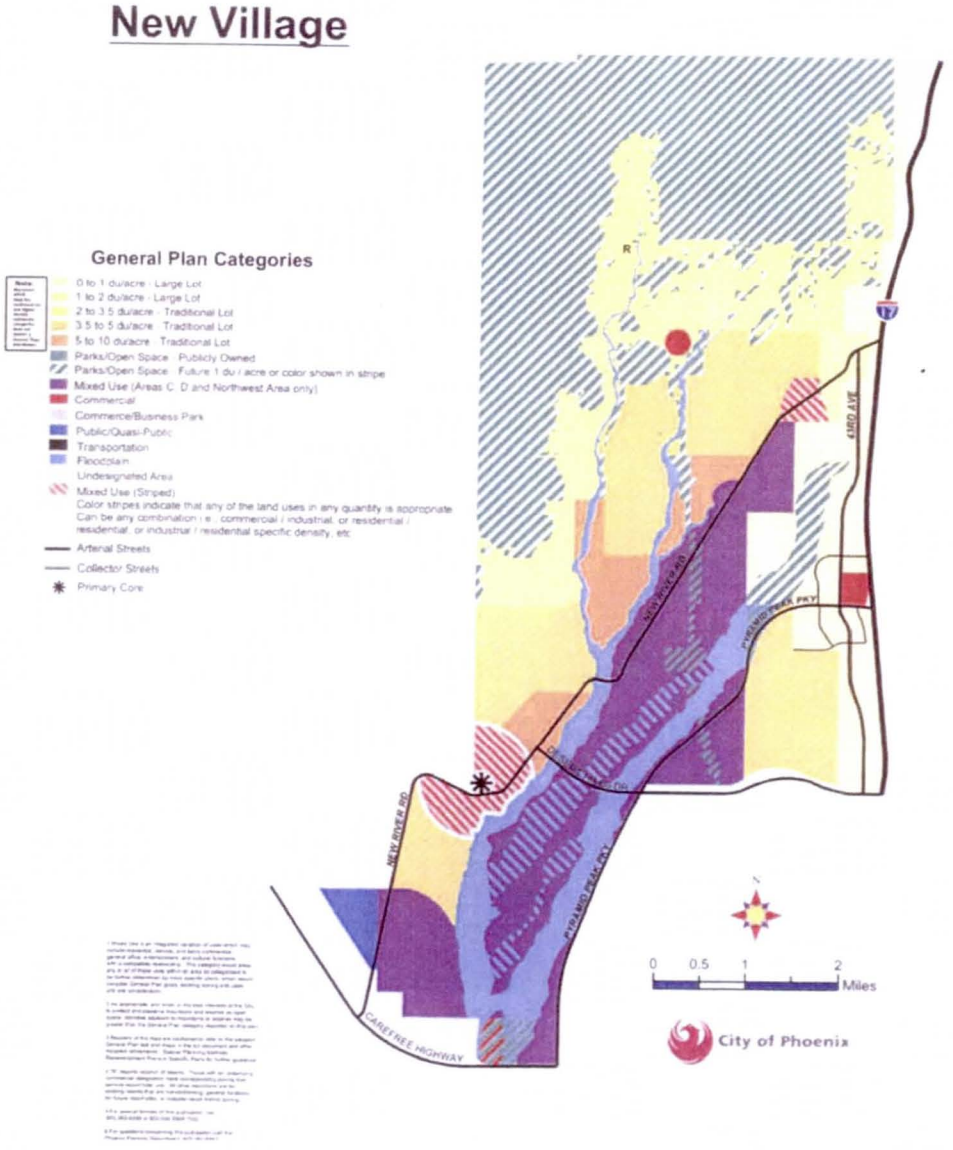


MAP 7. MASTER PLAN MAP

MARICOPA ASSOCIATION of GOVERNMENTS
West Valley Multi-Modal Transportation Corridor Master Plan
July 30, 2001
Funded by the Arizona Department of Transportation (ADOT) Enhancement Program
ADOT

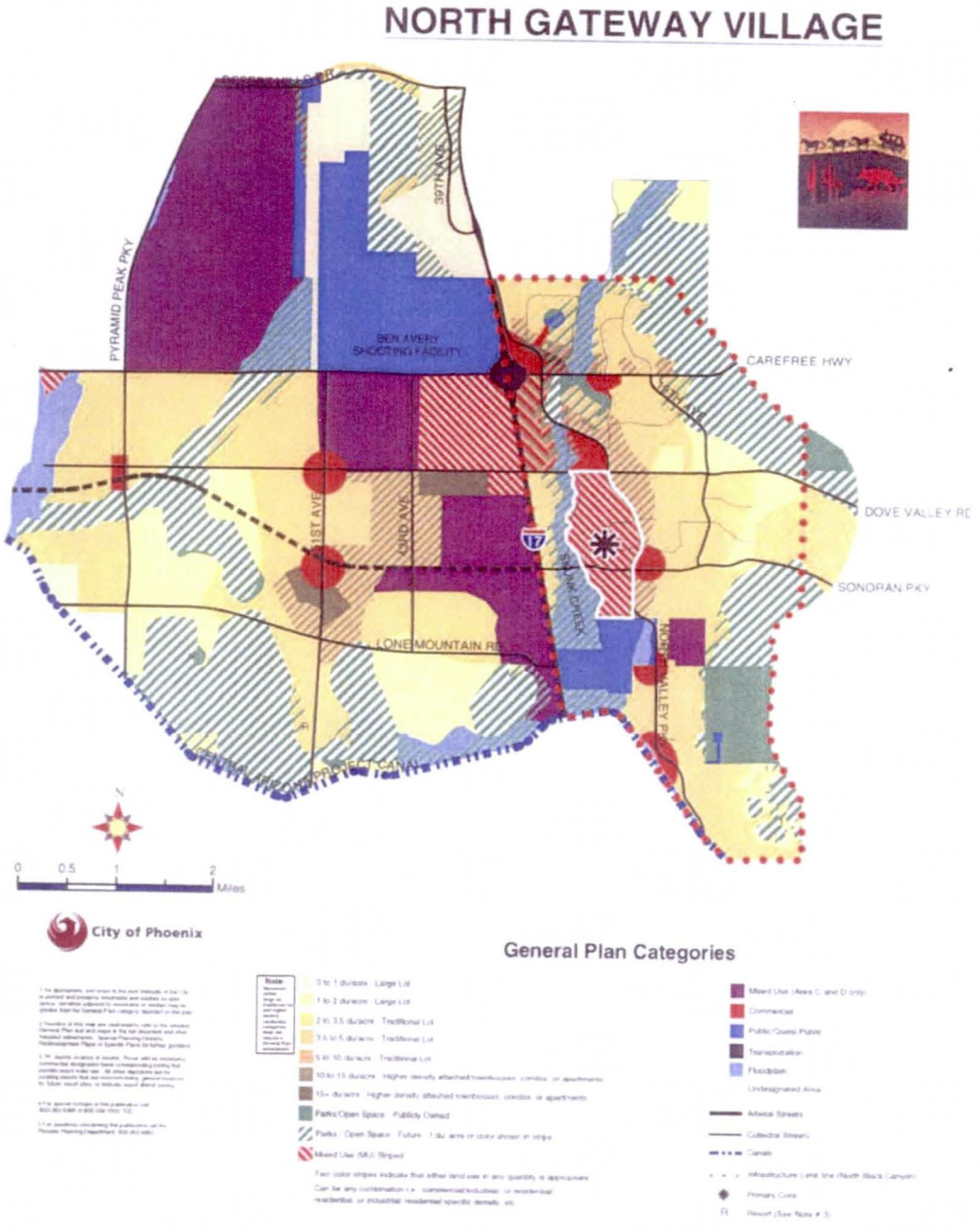
New Village General Plan

The *New Village* is located within the Upper New River study area. The City of Phoenix is and does not have a planning committee at this time, but will be formed in the future. The boundary for this village is Table Mesa Road alignment on the north, Interstate 17 on the east, and an irregular area on the south bounded by the Desert Hills Drive, Pyramid Peak Parkway and Carefree Highway. The western boundary is New River Road and the 75th Avenue alignment. The New Village General Plan has been developed and shows a large parks /open space area to the northwest with large lot planning and a central commercial core as you move south to New River Road, and mixed use development centrally located south of New River Road and along the floodplain which is framed with traditional lots.



North Gateway Village General Plan

The *North Gateway Village* is located within the Upper New River study area and is bound by the Central Arizona Project Canal on the south, 7th Avenue and 67th Avenue to the east and west and Desert Hills alignment to the North. The dominant open spaces include Deadmann Wash and the New River for trail access. Other plans include the Ben Avery Shooting Range, Pioneer Village, and Carefree Highway Scenic Corridor which shall provide recreational opportunities and are major features of the village.

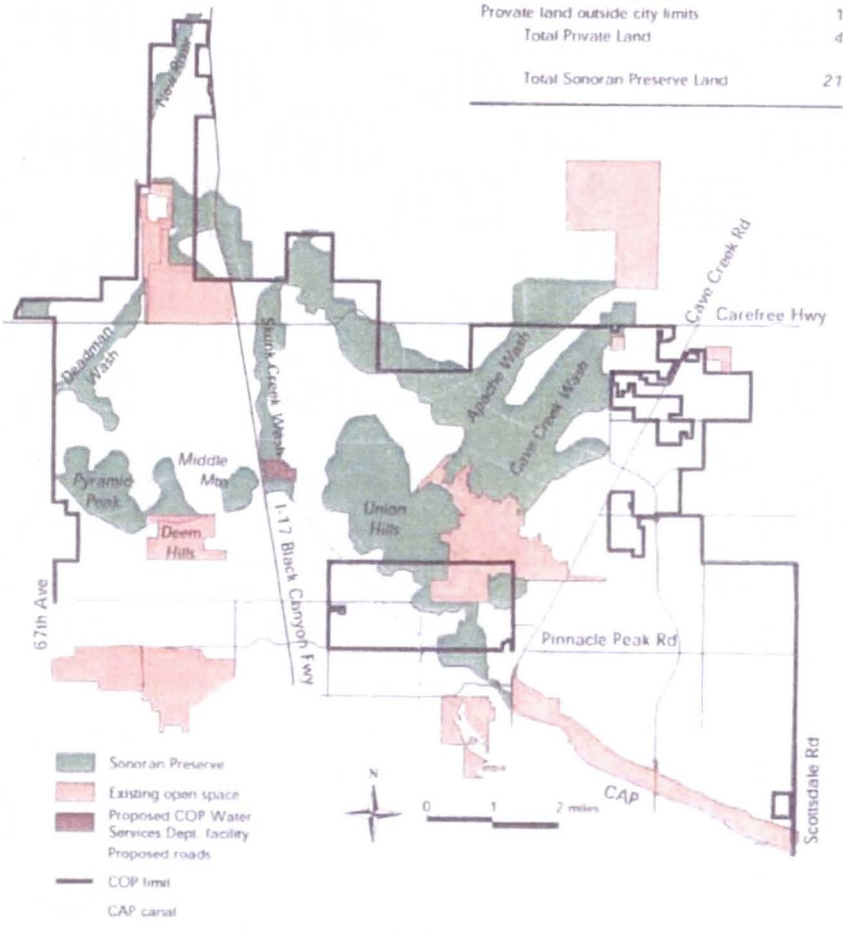


Phoenix Sonoran Preserve Master Plan

Preservation of land within the City of Phoenix is documented in the Phoenix Sonoran Preserve Master Plan. This plan's focus area, described as The North Study Area (NSA) has a portion of the site located within the Upper New River study area along the CAP and north of Carefree Highway. The Phoenix Sonoran Preserve Master Plan would like to promote; preservation of undisturbed desert lands providing visual and emotional relief to the daily stresses, create passive recreation, preserve flora and fauna, and environmental education. The Phoenix Sonoran Preserve Master Plan provides a system of unique natural open space that offers the community tremendous opportunity for outdoor recreation and contact with the natural environment and habitat. Within the local study area context, existing preserved sites within the NSA include areas along the CAP which is an important link to regional parks such as Lake Pleasant. Also reference the City of Phoenix Parks and Facilities Map (Figure 22).

Sonoran Preserve Land Ownership and Location

	In Acres
State land within city limits	14,800
State land outside city limits	2,000
Total State Land	16,800
Private land within city limits	2,800
Private land outside city limits	1,900
Total Private Land	4,700
Total Sonoran Preserve Land	21,500



3.5 Sonoran Preserve Master Plan

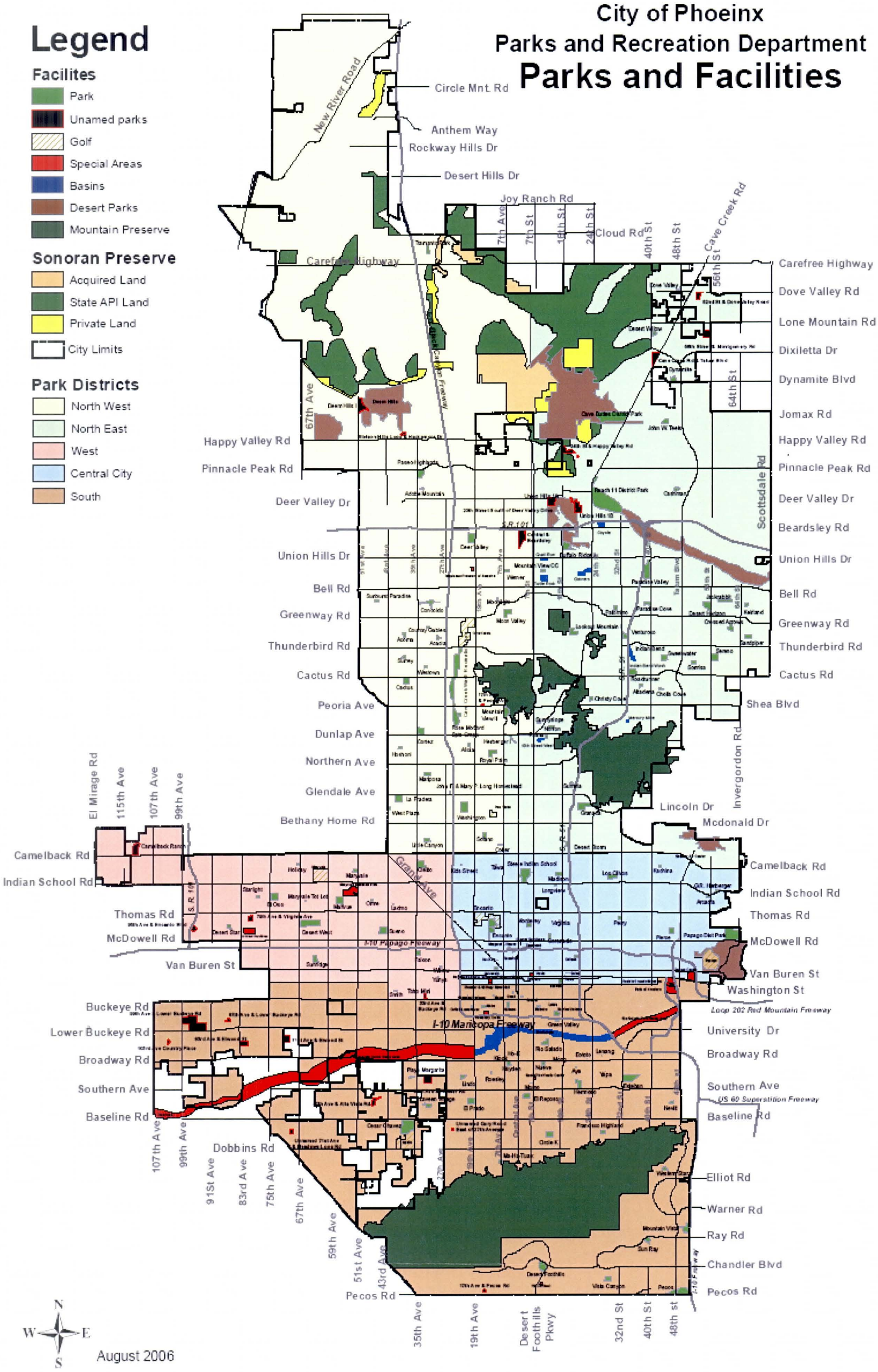
City of Phoeinx
Parks and Recreation Department
Parks and Facilities

Legend

Facilites
- Park
- Unamed parks
- Golf
- Special Areas
- Basins
- Desert Parks
- Mountain Preserve

Sonoran Preserve
- Acquired Land
- State API Land
- Private Land
- City Limits

Park Districts
- North West
- North East
- West
- Central City
- South



August 2006

LEGEND

Source: http://phoenix.gov/PARKS/parks.html
CITY OF PHOENIX, PARKS AND RECREATION DEPARTMENT

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan
FCD 2005CO20

Figure 22
City of Phoenix
Parks and Facilities

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PREPARED BY: EDAW | AECOM

DATE: September 2007

4.4 Parks, Recreation Area and Open Spaces Compatibility

The RRA also includes an analysis of the relative compatibility of the regional recreation resources with flood protection methods (Section 3.1) that are routinely applied by the District in delivering flood protection services and facilities to the citizens of Maricopa County. Recreation compatibility ratings provide an indication of the range of flood protection methods that are expected to be compatible with or complementary to the types of recreation services and experiences provided by the different kinds of parks, recreation areas and open spaces identified in the inventory.

The flood protection methods are arrayed as a spectrum, wherein each successive method has an increasing potential for adversely impacting and changing the existing recreation environment and user experience. Each of the categories of parks, recreation areas and open spaces within the regional setting were evaluated for their compatibility with each of the six flood protection methods. Each method was then rated as either compatible or incompatible. The compatibility ratings were developed based upon a correlation of the following:

(1) The recreation management direction, types of recreation experiences provided, or expected to be provided, and the types and levels of development that are typically allowed to take place within each recreation category; and

(2) The types and levels of development and landscape alteration that is typically associated with each of the flood protection methods as reflected in narrative descriptions and photo examples of the methods.

The compatibility ratings and resulting compatibility classes are shown in the Table N. The ratings reflect typical District applications of the flood protection methods. Incompatible ratings may, in some instances, be overcome through the application of special or extraordinary treatments and designs.

RECREATION RESOURCES' COMPATIBILITY CLASSES MATRIX						
Parks, Recreation Use Areas and Open Spaces	Flood Protection Method					
	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Federal						
National Forest	C	IC	IC	IC	IC	IC
Wilderness Areas	C	IC	IC	IC	IC	IC
National Monuments	C	IC	IC	IC	IC	IC
National Wildlife Refuges/ Preserves	C	IC	IC	IC	IC	IC
State						
State Parks (None)	C	C	C	IC	IC	IC
Wildlife Areas	C	C	IC	IC	IC	IC
Regional						
County Regional Parks	C	C	IC	IC	IC	IC
County Recreation Areas	C	C	C	IC	IC	IC
City Regional Parks	C	C	IC	IC	IC	IC
City Mountain Preserves	C	C	IC	IC	IC	IC
County Open Spaces (e.g., MAG Desert Spaces Plan Designations)						
Secured Open Spaces	Refer to Above Designations					
Conservation Areas	C	C	C	IC	IC	IC
Retention Areas	C	C	IC	IC	IC	IC
Local						
City Parks	C					
Rural	C	C	C	IC	IC	IC
Suburban	C	C	C	IC	IC	IC
Urban	C	C	C	C	C	IC
Other Recreation Areas	C	C	C	C	C	IC
Golf Courses	C	C	I	IC	IC	IC

Table N
Recreation Resources' Compatibility Class Ratings

Compatibility Class 1 denotes categories of Parks, Recreation Areas and Open Spaces that are compatible only with the Non-Structural Method. Class 2 denotes categories that are compatible with the Non-Structural and Soft Structural Methods. Class 3 denotes categories that are compatible with the Non-Structural, Soft Structural and Semi-Soft Structural Methods. Class 4 denotes categories that are compatible with the Non-Structural, Soft Structural, Semi-Soft and Hard Structural with Aesthetic Treatment Methods.

4.5 Parks, Recreation Area and Open Spaces Compatibility Analysis

The information from the above Compatibility Ratings Table was utilized in GIS to produce the Parks and Open Space Compatibility map, Figure 19 and Figure 21 for the regional and local settings of the Upper New River ADMP respectively. From the table, it can be seen that there are three flood protection method compatibility classes based upon the inventory of existing recreation resources within the study area. No Compatibility Class was assigned to any areas not represented within any of the categories of parks, recreation areas and open spaces.

These compatibility ratings within the Upper New River Study Area predict the types of flood control methods that best complement the Visual Character of the existing recreation facilities and open spaces. Thus sensitive natural open spaces such as Hell's Canyon Wilderness Area, Lake Pleasant Regional Park, Spur Cross Ranch Recreation Area, Cave Creek Regional Park, Black Mountain Summit Preserve, Thunderbird Adobe Dam Regional Park Recreation Area, areas within the floodplain such as New River and Deadman wash and mountain areas located to the north of the study area, require context sensitive solutions to flood control issues that prohibit the presence of visible hard structures (Class 1 or 2). Other recreation areas which include the majority of the study area, such as the County designated retention areas are less restrictive (Class 3), but require that hard facilities be minimal and subordinate to the overall visual character of the landscape. More natural methods also are visually compatible with these recreation areas in that they would introduce positive visual variety into the landscape.

4.6 Analysis of Recreation and Multi-use Opportunities

The Recreation Resource Map (Figure 20) highlights the highly significant open spaces, parks and trails within the immediate surroundings of the Upper New River ADMP study area. As noted earlier there are proposals for establishment of neighborhood/community parks, local and regional trails along major washes that can greatly improve linkages to and between regional parks. The City of Phoenix and Peoria for example with their abundance of river corridors and natural landforms will be able to leverage resources with a comprehensive system of trails, bike routes and recreation corridors connecting to adjoining cities and regional recreation systems. These areas are also recommended for protection from development, and management that will protect, maintain and enhance their valued recreational, aesthetic and biological purposes. The City of Peoria in addition provides further dedicated open space, linear parks and trails along New River, Lake Pleasant and mountain areas within the study area. The conceptual parks, open space and trials highlights suitable locations to explore for recreation especially within the north and south portions of the study area since they coincide with the City of Phoenix's proposed Phoenix Sonoran Preserve Master Plan and open space designation within New Village. For example proposed trails along the CAP, Beardsley Canal and SR 74 can be developed into major East-West open space

NO DATA AVAILABLE

NO DATA AVAILABLE

Hells Canyon Wilderness Area

Lake Pleasant Regional Park

Maricopa County
City of Peoria

Lake Pleasant

Boulder Creek

Aqua Fria River

New River

500 KV Power Rd.

17

FH 41

Spur Cross Ranch Recreation Area

New River Rd.

Deadman Wash

Skunk Creek

Black Canyon Hiking and Equestrian Trail

Cave Creek Regional Park

Black Mtn. Summit Preserve

7th Street

74

New River Rd.

Ben Avery Rec. Area

East Carefree HWY

Maricopa County
City of Phoenix

Central Arizona Project Canal

Lake Pleasant Rd.

New River Dam

Thunderbird Regional Park

Adobe Dam Rec. Area

LEGEND

- Regional Boundary (10 mi.)
- Regional Trails

Compatibility Class

- 1
- 2
- 3
- No Data

Compatibity Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complimentary and Compatible
IC= Not Complimentary or Compatible

RECREATION RESOURCES' COMPATIBILITY CLASSES MATRIX

Parks, Recreation Use Areas and Open Spaces	Flood Protection Method: Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Federal						
National Forest	C	IC	IC	IC	IC	IC
Wilderness Areas	C	IC	IC	IC	IC	IC
National Monuments	C	IC	IC	IC	IC	IC
National Wildlife Refuges Preserves	C	IC	IC	IC	IC	IC
State						
State Parks (Notes)	C	C	C	IC	IC	IC
Wildlife Areas	C	C	IC	IC	IC	IC
Regional						
County Regional Parks	C	C	IC	IC	IC	IC
County Recreation Areas	C	C	C	IC	IC	IC
City Regional Parks	C	C	IC	IC	IC	IC
City Mountain Preserves	C	C	IC	IC	IC	IC
County Open Spaces (e.g., MAG Desert Spaces Plan Designations)						
Secured Open Spaces	Refer to Above Designations					
Conservation Areas	C	C	C	IC	IC	IC
Retention Areas	C	C	IC	IC	IC	IC
Local						
City Parks	C					
Rural	C	C	C	IC	IC	IC
Suburban	C	C	C	IC	IC	IC
Urban	C	C	C	C	C	IC
Other Recreation Areas	C	C	C	C	C	IC
Golf Courses	C	C	I	IC	IC	IC

Miles 0 0.5 1 2 3

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 19
Regional Recreation and Open Spaces Resources Compatibility (10 mi.)

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Boulder Creek
Aqua Fria River
500 Kv Power Rd
New River
FH 41
17
Lake Pleasant Regional Park
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
New River Rd
7th Street
Black Canyon Hiking and Equestrian Trail
Beardsley Canal
74
Ben Avery Rec. Area
East Carefree HWY
Loop 303 (Future)
Central Arizona Project Canal
Lake Pleasant Rd
New River
New River Dam
Maricopa County
City of Phoenix
Yavapai Co.
Gila Co.
Project Location
La Paz Co.
Yuma Co.
Maricopa Co.
Pinal Co.
Pima Co.

LEGEND

- Peoria Trailheads
- Peoria Trails
- Peoria Back-country Trails
- Regional Trails

Recreation (1 mile & Adjacent)

- County Regional Parks
- County Regional Recreation Areas
- City Regional Parks
- City Mountain Preserves
- County Open Spaces & Retention Areas
- County Open Spaces & Conservation Areas
- County Parks
- Local Parks & Golf Courses
- Proposed Peoria Parks

Scenic Integrity

- Scenic Routes

Other Features

- HistoricRd
- EcoCultural

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

PREPARED BY: EDAW | AECOM

DATE: September 2007

Flood Control District of Maricopa County
2801 W. Durango St.
Phoenix, AZ 85009

Upper New River Area Drainage Master Plan

FCD 2005CO20

Figure 20
Recreation and Open Space Resources (1 Mile)

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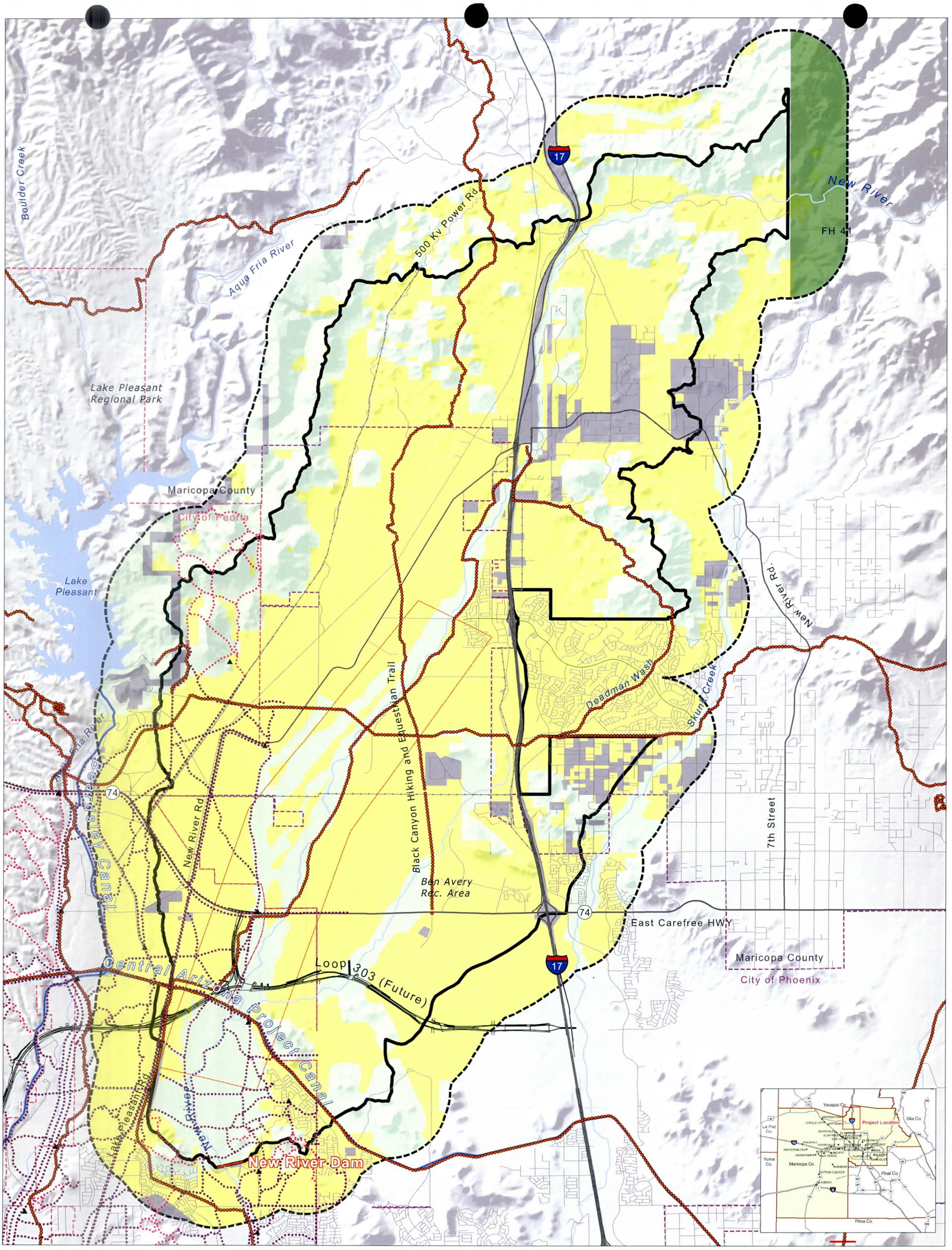

LEGEND

- ▲ Peoria Trailheads
- Peoria Trails
- Peoria Back-country Trails

Compatibility Class

- 1
- 2
- 3
- No Data

Compatibility Classes						
Compatibility Class 1	Non-Structural					
Compatibility Class 2	Non-Structural	Soft				
Compatibility Class 3	Non-Structural	Soft	Semi-Soft			
Compatibility Class 4	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment		
Compatibility Class 5	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	
Compatibility Class 6	Non-Structural	Soft	Semi-Soft	Hard w/ Aesthetic Treatment	Semi-Hard	Hard
Incompatible						

Compatibility Levels
C= Complimentary and Compatible
IC= Not Complimentary or Compatible

RECREATION RESOURCES' COMPATIBILITY CLASSES MATRIX

Parks, Recreation Use Areas and Open Spaces	Flood Protection Method					
	Non-Structural	Soft Structural	Semi-Soft Structural	Hard Structural w/ Aesthetic Treatment	Semi-Hard Structural	Hard Structural
Federal						
National Forest	C	IC	IC	IC	IC	IC
Wilderness Areas	C	IC	IC	IC	IC	IC
National Monuments	C	IC	IC	IC	IC	IC
National Wildlife Refuges/ Preserves	C	IC	IC	IC	IC	IC
State						
State Parks (None)	C	C	C	IC	IC	IC
Wildlife Areas	C	C	IC	IC	IC	IC
Regional						
County Regional Parks	C	C	IC	IC	IC	IC
County Recreation Areas	C	C	C	IC	IC	IC
City Regional Parks	C	C	IC	IC	IC	IC
City Mountain Preserves	C	C	IC	IC	IC	IC
County Open Spaces (e.g., MAG Desert Spaces Plan Designations)						
Secured Open Spaces	Refer to Above Designations					
Conservation Areas	C	C	C	IC	IC	IC
Retention Areas	C	C	IC	IC	IC	IC
Local						
City Parks	C					
Rural	C	C	C	IC	IC	IC
Suburban	C	C	C	IC	IC	IC
Urban	C	C	C	C	C	IC
Other Recreation Areas	C	C	C	C	C	IC
Golf Courses	C	C	I	IC	IC	IC

Miles
0 0.25 0.5 1

N

REFERENCE FEATURES:

- Project Boundary
- Project Buffer Area (1 mi.)
- Focus Area
- Interstate Highway
- Important Roads
- Other Roads
- Powerlines
- Dams
- Drainages
- Canals
- Lakes
- Peoria City Limits
- Phoenix City Limits

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DATE: September 2007

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Figure 21
Recreation and Open Space Resource Compatibility (1 Mile)

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connectors for linkages between Lake Pleasant Regional Park and New River. Also development of trails and open space along New River and other major wash corridors such as Deadman Wash make up for strong north-south connectors to regional parks such as Cave Creek Regional Park and Spur Cross Ranch Recreation Area. Another regional connection is the Black Canyon Hiking and Equestrian Trail with is a north-south link from SR 74 and stretches upward north of Cordes Junction into Prescott National Forest.

Moreover, utilizing the above identified existing and planned open space areas by way of flood control solutions (dams, basins, levees and/or channels) for recreation along New River will enhance the lifestyle for future residential development along the northwest portion of New River Road designated in the New Village General Plan. Such recreation facilities should be planned in a manner that blend appropriately with the natural settings and enhance the appearance and experience of the natural Sonoran desert.

APPENDIX A – Cultural Settings Definitions

Natural and Pastoral

Natural and Pastoral settings usually exist as large tracts of rugged and naturally appearing landscapes in Maricopa County. The visual character of the wildland landscapes is dominated by informal arrangements of landform, vegetation, water features and rock formations that derive from natural land forming and ecological processes. Cultural features are non-existent or usually remain visually subordinate to the natural characteristics in these settings. The Mountain Preserves, County Regional Parks and National Forest Lands are representative of Wildland Landscape Settings in Maricopa County.

Rural

Rural settings include patterns, which lack formal development and are considered either vacant (used for grazing) or used for crop production. The agricultural settings may vary according to the time of year and type of crop produced (cotton fields, orchards). These settings include a wide range of small to large scale agricultural landscapes located predominantly within the valley lands of Maricopa County. They include farmlands, croplands, orchard lands, nursery lands, dairies, feedlots, and cattle and horse ranches. Rural landscapes are "cultural" open space resources in Maricopa County that are often valued for their historical significance. The cultural features often include a variety of visually arresting industrial architectural forms that form powerful images when viewed against the contrast of the wide horizontal plain. Seasonal changes of crops and the presence of domestic livestock adds to the visual interest of these settings.

Suburban

Suburban images include clustered development patterns with high visibility and are often orientated specifically to the roadway. Structures and architectural treatments are often highly unified. The suburban settings include a variety of small to medium scale residential, commercial and public facilities, parks, and streetscapes that vary in terms of their overall architectural styles, colors, materials, arrangement and composition. They are characterized by a balance of structural, park and open space features. These are typically managed landscapes that include a variety of formal and informal arrangements of managed resource and cultural features. They include a wide variety of architectural themes, mostly borrowed from other regions of the United States.

Urban

Urban images include a variety of development patterns that display an integration of the visual character and planning concept. There is often a strong repetition of design elements that are organized around circulation patterns that are often gridded.. The urban landscape setting includes a variety of medium to large-scale commercial and public structures, plazas, parks and streetscapes. They are characterized by medium to high density of often formally arranged structural elements, often constructed of concrete, steel and glass materials that visually dominate the setting. Downtown Phoenix provides the strongest and most positive example of the urban landscape setting in Maricopa County.

Industrial

Industrial images consist of development patterns in which structures dominate the visual character. Buildings and facilities are often large scale and complex. Open space treatment is limited primarily to the perimeter of the development and is not integrated into the overall planning concept. The industrial landscape setting includes a variety of moderate to large-scale structural facilities, containing a wide variety of visually arresting forms, often in formal arrangements that visually dominate the character of open spaces and other features within the setting. Streetscapes within these settings vary widely in their appearance from attractively landscaped green spaces to completely untreated areas. The Durango area of the City of Phoenix provides many examples of the industrial landscape setting.

APPENDIX B – Glossary of Terms *(From PELCA)*

Aesthetics
Generally, the study, science, or philosophy dealing with beauty and with judgments concerning beauty. In scenery management, it describes landscapes that give visual and sensory pleasure.

Attribute
An inherent landscape characteristic, trait, or quality

Balance
Visual stability produced, and equilibrium established in a landscape, by natural forces or human intervention

Base Map
The document that graphically records existing physical and administrative features of a given landscape

Characteristic
Qualities that constitute a character, that characterize a landscape; a distinguishing trail, feature, or quality uniqueness; attribute

Composition
Assembly and organization of components in a work of art or such organization in the landscape

Contrasts
Diversity or distinction of adjacent parts. Effect of striking differences in form, line, color, or texture of a landscape.

Cultural Element
Attributes in a human-altered landscape; scenically positive cultural elements, most of which have historical backgrounds or nostalgic connotations. Examples include split-rail fences, stone walls, barns, orchards, hedgerows, and cabins.

Desert Varnish
A dark, shiny surface of manganese and iron oxides that characterizes many exposed rock surfaces in deserts.

Desired Landscape Character
Appearance of the landscape to be retained or created over time, recognizing that a landscape is a dynamic and constant change in community of plants and animals. Combination of landscape design attributes and opportunities, as well as biological opportunities and constraints.

Distinctive
Refers to extraordinary and special landscapes. These landscapes are attractive, and they stand out from common landscapes.

Disturbance
A discrete event, either natural or human induced, that causes a change in the existing condition of an ecological system.

Dominance Elements
In scenery management, the dominance elements are form, line, color and textures. They are the attributes that make up the landscape character.

Form
Structure, mass, or shape of a landscape or of an object. Landscape form is often defined by edges or outline of landforms, rock forms, vegetation patterns, or waveforms, or the enclosed spaces created by these attributes.

Frame of Reference
An area or framework against which various parts can be judged or measured.

Harmony
Combination of parts of a landscape into a pleasing or orderly whole, A state of agreement, congruity, or proportionate arrangement of from, line, color, and texture.

Landform
One of the attributes or features that make up the Earth's surface, such as a plain, mountain, or valley.

Landscape
An area composed of interacting ecosystems that are repeated because of geology, landform, soils, climate, biota, and human influences throughout the area. Landscapes are generally of a size, shape, and pattern, which are determined by interacting ecosystems.

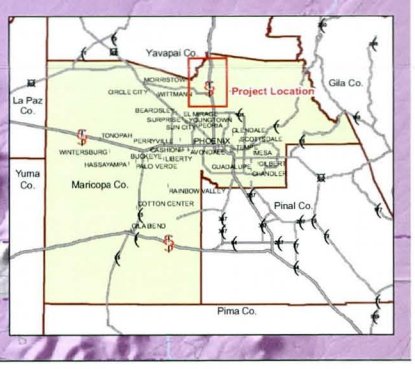
Line
An intersection of two planes; a point that has been extended; a silhouette of form. In landscapes-ridges, skylines, structures, changes in vegetation, or individual trees and branches-may be perceived as line.

Pastoral Landscape Character
Landscape Character that has resulted from human activities, containing positive cultural elements such as historic conversion of native forests into farmlands, pastures, and hedgerows, plus some remnants of native forests.

Texture
Visual interplay of light and shadow created by variations in the surface of an object. Grain or nap of a landscape or a repetitive pattern of tiny forms. Visual texture can range from smooth to course.

Variety
An intermixture, diversity, or succession of different things, forms, or qualities in the landscape.

Bradshaw Mountains
Boulder Creek
Agua Fria River
500 Kv Power Rd.
New River Mountains
New River
FH 41
New River Rd.
Gavilan Peak
Daisy Mountain
Maricopa County
City of Peoria
Lake Pleasant
Deadman Wash
Skunk Creek
New River Rd.
Agua Fria River
Beardsley Canal
New River Rd.
Phillips Mountain
7th Street
East Carefree HWY
Maricopa County
City of Phoenix
Loop 303 (Future)
Central Arizona Project Canal
Lake Pleasant Rd.
New River
Eastwing Mountains
Pyramid Peak
New River Dam
Middle Mountain
Union Hills
Deems Hills



LEGEND

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0 0.25 0.5 1 Miles

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Figure 1
Base Map of Project Boundaries and Reference Features

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